CENTRAL STATISTICAL OFFICE

CSO Economic Trends

ARTICLE

Some problems in assessing unemployment trends

No 298
August 1978
HMSO £1.95 net

A publication of the Government Statistical Service

Release dates of economic statistics to be published in September 1978

This list is published by the Government Statistical Service as a guide to the dates of publication of major economic series in September. The dates are those which Departments, or other organisations concerned, are aiming at, and would normally expect to meet. Exceptionally, there may be a delay resulting from unavoidable statistical problems of collection and compilation. Further enquiries about individual series should be addressed to the source named.

Publication date	Series	Method of release	Source
September 1978			
Fri 1	United Kingdom Balance of Payments 1967–77 (Pink Book)	Pink Book	CSO
Mon 4	UK official reserves (August)	PN	HM Treasury
	Capital issues and redemptions (during the month of August)	PN	Bank of England
	Public sector borrowing requirement and details of local authority borrowing (2nd qtr)	PN	CSO
Tues 5	Retail sales (July—final)	PN	D of Trade
	UK banks' elegible liabilities, reserve assets, reserve ratios and special deposits (mid–August)	PN	Bank of England
	London clearing banks' monthly statement (mid–August)	PN	C L C B
	Hire purchase and other instalment credit business (July)	PN	D of Trade
Wed 6	United Kingdom balance of payments (2nd qtr)	PN	CSO
	Construction—output (2nd qtr)	PN	D of the Environment
	Housing starts and completions (July)	PN	D of the Environment
Thurs 7	Provisional figures of vehicle production (August)	PN	D of Industry
Fri 8	National Income and Expenditure 1967–77 (Blue Book)	Blue Book	CSO
	Company liquidity survey (2nd qtr)	T and I	D of Industry
Mon 11	Retail sales (August—provisional)	PN	D of Trade
	Wholesale price index numbers (August—provisional)	PN	D of Industry
	Central government financial transactions (including borrowing requirement) (August)	PN	HM Treasury
Tues 12	Building societies' receipts and loans (August)	PN	BSA
Wed 13	Index of industrial production (July—provisional)	PN	CSO
Thurs 14	UK banking sector statistics (2nd qtr)	Bulletin	Bank of England
	Financing of the central government borrowing requirement (2nd qtr)	Bulletin	Bank of England
	Money Stock (2nd qtr)	Bulletin	Bank of England
	UK banks' assets and liabilities and the money stock (mid–August)	PN	Bank of England
	London dollar and sterling certificates of deposit (mid–August)	PN	Bank of England
	Balance of payments current account and overseas trade figures (August)	PN	D of Trade/CSO
Fri 15	Usable steel production (August)	PN	BSC/BISPA
	Retail prices index (August)	PN	D of Employment
	Cyclical indicators for the UK economy (August)	PN	CSO
Sun 17	Department for National Savings' monthly progress report (August)	PN	D for National Savings
Wed 20	Basic rates of wages and normal weekly hours (August)	PN	D of Employment
	Monthly index of average earnings (July)	PN	D of Employment
	Construction—new orders (July)	PN	D of the Environment
	Gross domestic product (2nd qtr—provisional)	PN	CSO
Thurs 21	Car and commercial vehicle production (August—final)	PN	D of Industry
	Capital expenditure by the manufacturing distributive and service industries (2nd qtr—revised)	PN	D of Industry
	Manufacturers' and distributors' stocks (2nd qtr—revised)	PN	D of Industry
	Finished steel consumption and stock changes (2nd qtr—final)	PN	D of Industry
Fri 22	Sales and orders in the engineering industries (June)	T and I	D of Industry
	Bricks and cement production (August)	PN	D of the Environment
	New vehicle registrations (August)	PN	D of Transport
Mon 25	National Food Survey report on consumption (2nd qtr)	PN	MAFF
	Quarterly analysis of bank advances (mid–August)	PN	Bank of England
Tues 26	Unemployment (September—provisional)	PN	D of Employment
	Unfilled vacancies (September—provisional)	PN	D of Employment
Thurs 28	Unemployment (August—final)	PN	D of Employment
	Employment in the production industries (July)	Gazette	D of Employment
	Overtime and short-time working in manufacturing industries (July)	Gazette	D of Employment
	Stoppages of work due to industrial disputes (August)	Gazette	D of Employment
	Energy Trends	PN	D of Energy

PN—*Press Notice* T and I—*Trade and Industry*

CENTRAL STATISTICAL OFFICE

Economic Trends

No 298
August 1978

London: Her Majesty's Stationery Office

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First published 1978

Government Statistical Service

A service of statistical information and advice is provided to Government by specialist staffs employed in the statistics divisions of individual Departments. Statistics are made generally available through their publications and further information and advice on them can be obtained from the Department concerned.

The sources of the series published in this volume and further information about them are shown in the index. Current telephone numbers of these sources as well as general information about *Economic Trends* can be obtained from the Central Statistical Office, Great George Street, London SW1P 3AQ. Telephone 01-233 6135/6193.

Enquiries about orders and subscriptions should be made to the publisher, Her Majesty's Stationery Office, PO Box 569, London SE1 9NH. Telephone 01-928 6977.

ISBN 0 11 724987 4
ISSN 0013–0400

Introduction

Economic Trends is prepared monthly by the Central Statistical Office in collaboration with the statistics divisions of Government Departments and the Bank of England.

It contains three regular sections of tables and charts illustrating trends in the UK economy:

- 'Latest developments' presents the most up-to-date statistical information available during the month, together with a calendar of current economic events. It is important to note that data included in this section may not be wholly consistent with other sections which have gone to press earlier.
- The main section shows the movement of the key economic indicators over about the last five years. The indicators appear in tabular form on left hand pages with corresponding charts on facing right hand pages. Colour has been used to aid interpretation in some of the charts, for example by creating a background grid on those charts drawn to a logarithmic scale. Index numbers in some tables and charts are given on a common base year for convenience of comparison.
- A further chart shows the movements of four composite indices over 19 years against a reference chronology of business cycles. The indices group together indicators which lead, coincide with and lag behind the business cycle, and a short note describes their most recent movements. The February, May, August and November issues carry further graphs showing separately the movements in all of the 18 indicators which make up the composite indices.

In addition, quarterly articles on the national accounts appear in the January, April, July and October issues, and on the balance of payments in the March, June, September and December issues. Occasional articles comment on and analyse economic statistics and introduce new series, new analyses and new methodology. The regular 'Round-up' feature contains notes on relevant articles appearing in other publications, news of developments in economic statistics and brief synopses of any new publications.

Notes on the tables

1. The main tables and charts in this issue contain information available to the CSO on 21 August. The 'Latest developments' section may contain later information.

2. The statistics relate mainly to the United Kingdom; where figures are for Great Britain only, this is shown on the table.

3. Rounding may lead to inconsistencies between the sum of constituent parts and the total in some tables.

4. A line drawn across a column between two consecutive figures indicates that the figures above and below the line have been compiled on different bases and are not strictly comparable. In each case a footnote explains the difference.

Corrections to the July 1978 issue

Article: 'National income and expenditure in the first quarter of 1978'.

Page 77 Table 2 *Factor incomes in the gross national product.* Factor incomes: Total domestic income, Seasonally adjusted data, 1978 Quarter 1—
Delete 36,685 **Substitute** 33,685

Page 111, 'Round-up: What's new in economic statistics'. *Sector analysis of employment.* Public corporations, Mid-1977 (provisional)—
Delete 2,076 **Substitute** 2,086

Symbols used:

.. not available or not meaningful
– nil or less than half the final digit shown
§ series for which measures of variability are given on page 76
† indicates that the data have been revised since last issue; the period marked is the earliest in the table to have been revised

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Articles published in recent *Economic Trends*	*inside back cover*

Latest developments in the economy[1]

Data available at 22 August 1978

Output

The preliminary estimate of gross domestic product based on output data for the second quarter is about ½ per cent higher than for the first quarter. Higher industrial output accounted for most of the increase.

The latest estimates for industrial production suggest that the average level of industrial output in the second quarter was about one per cent more than in the first quarter. Output by the consumer goods industries rose by about ½ per cent, but the output of the investment goods industries fell by ½ per cent: the output of the intermediate goods industries increased by 2 per cent.

Steel production increased in July when it was ½ per cent higher than in July last year. However, production of passenger cars fell back sharply in July and, in the three months ended July, was 14 per cent less than in the preceding three months.

According to the Industrial Trends Survey conducted by the Confederation of British Industry in July there has been no overall change in optimism about the general business situation since April. There has now been no substantial change in business confidence for eighteen months. There has been no overall improvement since April in the inflow of new orders, but increases are reported by the chemicals, paper, printing and publishing, and electrical consumer goods industries. Fewer firms reported price competitiveness as a factor limiting new export orders.

Housebuilding

In the second quarter of 1978, housing starts were 13 per cent up on the first quarter and 3 per cent higher than in the second quarter of 1977. Total completions were unchanged compared with the first quarter but were 7 per cent fewer than in the second quarter of last year.

Consumers' expenditure

The latest estimates now suggest that total consumers' expenditure in the second quarter was only a little more than in the first quarter. There were rises in expenditure in most areas of retail sales and on some services, but personal expenditure on motor vehicles and on food, drink and tobacco fell back from their high first quarter levels.

Provisional estimates suggest that the volume of retail trade rose further during July: the increase appears to have been concentrated in sales by non-food shops. During the three months ended July, the volume of retail sales was 2 per cent higher than in the previous three months.

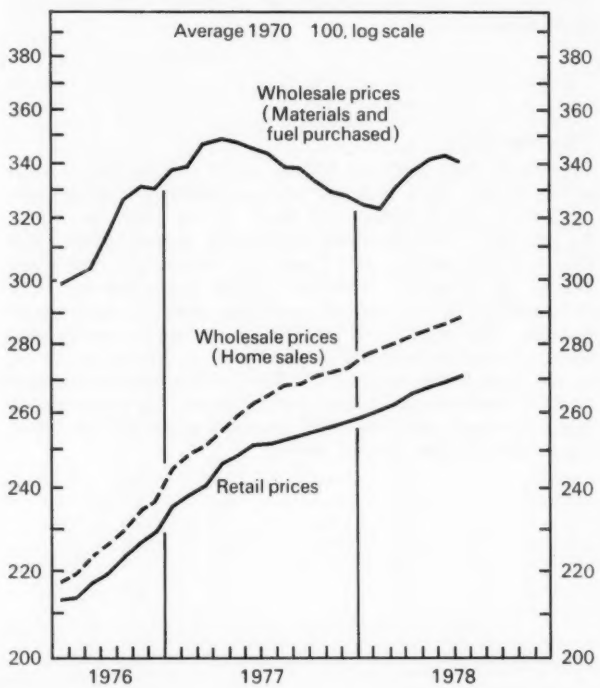
Investment intentions

The latest CBI survey indicates that, after the substantial increase in the volume of private manufacturing fixed capital expenditure that occurred during 1977, the level of capital authorisations may now be declining relative to last year. Nevertheless, if present intentions are fulfilled, the volume of private manufacturing investment might be expected to rise by between 10 and 12 per cent between 1977 and 1978, with a further rise of about 10 per cent during 1979.

Earnings and wage rates

Average earnings of employees in all industries and services in Great Britain increased by 15·4 per cent between June 1977 and June 1978. This estimate is based on the new series of monthly index numbers of average earnings for the whole economy (not seasonally adjusted). The older series, which is seasonally adjusted and covers production industries and some services, rose by 2·0 per cent compared with May.

The index of basic weekly wage rates (not seasonally adjusted) rose during July and, at the end of that month, was 15·1 per cent higher than a year earlier. This index only takes account of changes in nationally negotiated rates. The year on year increase consequently reflects the new national rates for engineering workers that became effective in April 1978 after remaining unchanged from February 1976.



Prices (not seasonally adjusted)

The index of retail prices for July was 198·1 (January 1974 = 100). This represents an increase of 0·5 per cent on June and of 7·8 per cent on July 1977.

[1] All data are seasonally adjusted unless otherwise stated. In most cases estimates are provisional and subject to revision.

The provisional wholesale price index for home sales of all manufactured products increased by $\frac{3}{4}$ per cent in July compared with June. The increase measured over a twelve-month period fell for the twelfth successive month to $8\frac{1}{2}$ per cent in July.

The provisional price index for materials and fuel purchased by manufacturing industry fell by $\frac{3}{4}$ per cent in July and was $1\frac{1}{4}$ per cent lower than a year earlier. The fall in the latest month reflects in part the effect of the appreciation of sterling on import prices.

Trade and the balance of payments

In the three months ended July there was a visible trade deficit of £476 million, compared with a deficit of £49 million in the previous three months. This worsening in the balance of trade reflected a marked rise in imports of finished manufactures and semi-manufactures (other than chemicals): there was an improvement of £88 million in the balance on oil and the more erratic items of trade. Export volume fell by $1\frac{1}{2}$ per cent (a marginal fall excluding the more erratic items), and import volume rose by 3 per cent ($4\frac{1}{2}$ per cent excluding the more erratic items). The terms of trade index was unchanged.

The current account for July is estimated to have been in deficit by £30 million. The deficit on trade in goods was £150 million and the surplus on invisibles is projected as £120 million.

Money stock

During the four weeks to 19 July, the broad sterling version of the money stock (sterling M_3) increased by £520 million or 1·1 per cent. Since mid-April it has risen by about $2\frac{1}{4}$ per cent. The narrower version of money stock (M_1) rose by £415 million or 1·7 per cent during the four-week period. In contrast, domestic credit expanded by only £110 million in this period, much less than in other recent months. Although bank lending in sterling to the private sector (including substantial purchases of commercial bills by the issue department of the Bank of England) amounted to £570 million, the public sector borrowing requirement was quite small and was much less than purchases of public sector debt by the general public.

Economic events

July

17 At the Bonn Summit meeting, agreement was reached on measures to foster growth and trade, and to reduce dependence on imported energy. Progress will be reviewed by the end of 1978.
The Home Secretary announced, following the publication of Lord Edmund-Davies' report on police pay, that the police would be given pay rises averaging 40 per cent in two stages, the first 20 per cent from 1 September and the rest in 12 months' time.

21 The Government set out the pay policy which will apply from 1 August in a White Paper *Winning the Battle Against Inflation* (Cmnd 7293). The guideline for earnings increases in 1978–79 is set at 5 per cent, with some very limited exceptions. A Bill was introduced in Parliament to extend the Government's powers to control dividends for a further 12 months from 1 August, on the present basis including the 10 per cent limit on increases.

25 Draft Bills on Banking and Credit Unions, to protect depositors in cases of banking failures, were published. A system of licensing for all deposit-taking institutions would be introduced by the prospective legislation.

28 The West German Government announced a package of economic measures totalling DM12·25 billion, to stimulate growth.

31 The Finance Bill 1978 and the Dividends Bill 1978 received the Royal Assent.

August

1 The 1978–79 pay round began.

2 The Government announced a number of proposed changes in the Petroleum Revenue Tax (PRT) designed to increase the public share of profits from North Sea oil and gas. Three changes are proposed:
- an increase in the rate of PRT from 45 per cent to 60 per cent from 1 January 1979;
- a reduction in the uplift given for certain capital expenditure (which is additional to the normal 100 per cent allowance) from 75 per cent to 35 per cent for qualifying expenditure under contracts made after 2 August 1978 – there will be special transitional arrangements for uplift on capital expenditure to be incurred under existing contracts;
- a reduction from 1 January 1979 in the oil allowance (the amount of oil which is free of PRT) from 1 million tons a year to a cumulative limit of 5 million tonnes per field.

Provisions to give effect to the proposals will be included in next year's Finance Bill.
The proposed changes would increase revenue from North Sea oil by about £2 billion between now and the mid-eighties.

10 It was announced that Peugeot-Citroen, the French motor group, is to take over the European operations of the Chrysler Corporation.
The Bank of England released £207 million in special deposits to the London and Scottish clearing banks to ease pressure on the money markets.

17 The Government is to extend the banks' supplementary special deposits scheme ('the corset'), introduced in June, from this autumn until June 1979 to restrict the growth in bank lending.

Selected monthly indicators[1]

	Seasonally adjusted					Unadjusted				Seasonally adjusted			
	1971 =100	Thousands	1970 =100	Thousands		Jan. 1976 =100	1970 =100	Jan. 1974 =100	December 1971 =100	£ million			
	Volume of retail sales (GB)[2, 3] §	New registrations of cars (GB) §	Index of industrial production[4] §	Unemployment[5] §	Vacancies[6] §	Average earnings New series (whole economy: GB)	Wholesale prices of materials and fuel[7]	General index of retail prices (all items)	Sterling effective exchange rate	Balance of payments current account: Exports (f.o.b.) §	Balance of payments current account: Imports (f.o.b.) §	Balance of payments current account: Current balance	Money stock sterling M_3
1976 O	105·9	107·0	102·6†	1,305·9	126·5	108·5	327·7	163·5	59·2	2,335	2,626		39,730
N	106·6	120·5	103·0	..	.. [8]	110·6	331·8	165·8	59·1	2,314	2,757	−279	40,300
D	105·2	109·9	103·3	1,320·3[8]	.. [8]	111·3	330·2	168·0	60·5	2,448	2,675		40,200
1977 J	104·5	94·7	103·5	1,329·9	.. [8]	110·9	337·8	172·4	61·8	2,481	2,991		39,670
F	104·0	112·7	103·3	1,330·0	148·8	111·0	339·5	174·1	61·7	2,479	2,663	−493	39,460
M	101·7	103·8	103·3	1,328·5	154·0	113·3	347·2	175·8	61·9	2,542	2,795		39,560
A	102·3	106·0	102·4	1,333·8	155·5	113·1	349·7	180·3	61·7	2,591	2,759		40,330
M	103·2	107·8	103·4	1,323·8	159·4	114·9	348·3	181·7	61·6	2,590	2,869	−365	40,660
J	102·1	95·3	100·4	1,364·3	158·1	115·4	345·2	183·6	61·5	2,749	3,066		40,960
J	104·8	112·6	103·1	1,398·5	155·2	116·2	344·5	183·8	61·0	2,793	2,955		41,320
A	104·7	116·4	103·0	1,410·3	153·4	115·7	338·8	184·7	62·0	2,851	2,690	+537	41,290
S	103·5	107·1	102·8	1,434·9	147·2	116·6	338·1	185·7	62·4	2,896	2,841		41,990
O	102·7	116·1	102·1	1,431·5	156·0	117·9	333·8	186·5	62·5	2,756	2,703		42,550
N	103·1	108·3	102·0	1,429·6	159·4	120·1	329·9	187·4	63·6	2,668	2,600	+486	42,840
D	106·9	104·2	103·1	1,422·3	165·0	121·7	328·0	188·4	63·8	2,780	2,856		43,250
1978 J	104·9	124·8	103·2	1,419·2	180·3	121·5	324·9	189·5	66·0	2,623	2,961		44,280
F	106·8	119·8	103·7	1,409·0	187·0	122·7	324·2	190·6	66·0	2,989	2,946	−305	45,330†
M	107·0	142·5	103·5	1,400·0	195·8	125·0	331·0	191·8	64·1	2,829	3,108		45,620
A	106·7	131·8	105·4	1,387·1	203·7	127·2	337·4	194·6	61·8	2,995†	2,808†		46,760
M	108·4	124·2	103·3	1,366·4	209·9	129·4†	341·5	195·7	61·5	2,872	3,090		47,160
J	108·6	132·7	104·2	1,364·7	217·4	133·1[10]	343·1[10]†	197·2	61·3	2,920	3,028		47,310
J	110·5[10]			1,371·4	211·0		340·2[10]	198·1	62·1	3,045	3,195		47,830
A													
S													
	Percentage change, latest three months on previous three months												
1977 O	+ 0·3	+ 7·6	+ 0·3	+ 4·7	− 3·4	..	− 2·6	+ 1·4	+ 1·5	+ 4·6	− 7·3	..	+ 2·4
N	− 0·6	+ 2·2	+ 0·1†	+ 2·9	− 0·9	..	− 2·6	+ 1·4	+ 2·2	− 0·9	− 6·5	..	+ 3·1
D	+ 0·1	− 2·2	− 0·6	+ 0·9	+ 5·4	..	− 2·9	+ 1·5	+ 2·4	− 4·1	− 3·9	..	+ 3·2
1978 J	+ 1·4	− 0·7	+ 0·1	− 0·1	+10·5	..	− 2·8	+ 1·5	+ 3·5	− 5·1	+ 2·2	..	+ 3·6
F	+ 3·1	+ 5·2	+ 1·0	− 1·1	+15·1	..	− 2·5	+ 1·6	+ 3·9	+ 0·9	+ 7·6	..	+ 4·3
M	+ 1·8	+17·8	+ 1·0	− 1·3	+17·2	..	− 1·2	+ 1·7	+ 3·3	+ 2·9	+10·5	..	+ 5·1
A	+ 1·6	+16·8	+ 1·4	− 1·8	+16·2	..	+ 1·0	+ 2·1	− 0·8	+ 9·2	+ 5·3	..	+ 5·6†
M	+ 0·9†	+14·2	+ 0·7	− 2·3	+14·5	..	+ 3·4	+ 2·4	− 4·3	+ 3·6†	+ 2·8†	..	+ 5·0
J	+ 1·6	+ 0·4	+ 0·8	− 2·6	+12·1	..	+ 4·3[10]	+ 2·7	− 5·9	+ 4·1	− 1·0	..	+ 4·4
J	+ 2·2[10]			− 2·2	+ 8·8	..	+ 3·2[10]	+ 2·4	− 3·7	+ 0·3	+ 5·1	..	+ 3·3
A													
S													
	Percentage change, latest three months on corresponding period of previous year												
1977 O	− 2·9	+10·1	+ 1·1	+ 9·1	+19·8	+ 7·9	+ 6·9	+15·3	+ 1·5	+25·6	+ 7·2	..	+ 6·6
N	− 3·2	+ 5·8	− 0·1	..	..	+ 8·3	+ 2·9	+14·2	+ 4·0	+20·9	+ 2·1	..	+ 6·6
D	− 1·4	− 2·4	− 0·6	..	..	+ 8·9	+ 0·2	+13·1	+ 6·2	+15·6	+ 1·3	..	+ 7·0
1978 J	− 0·3 r	+ 3·9	− 0·5	..	..	+ 9·2	− 1·7	+11·7	+ 6·6	+11·4	− 0·1	..	+ 8·5
F	+ 1·6	+ 9·9	—†	+ 6·8	..	+ 9·8	+ 3·0	+10·5	+ 6·4	+13·3	+ 5·2	..	+11·3
M	+ 2·9	+24·3	+ 0·1	+ 6·0	..	+10·1	− 4·3	+ 9·5	+ 5·8	+12·5	+ 6·7	..	+13·9†
A	+ 4·1	+22·2	+ 1·2	+ 5·1	+28·0	+11·1	− 4·2	+ 8·8	+ 3·6	+15·8	+ 7·8†	..	+15·4
M	+ 4·9	+25·4	+ 1·0	+ 4·2	+30·0	+11·8	− 3·4	+ 8·2	+ 1·2	+12·6†	+ 6·9	..	+15·8
J	+ 5·4	+26·9	+ 2·2	+ 2·4	+33·4	+13·5[10]	− 2·0[10]†	+ 7·7	− 0·1	+10·8	+ 2·7	..	+15·8
J	− 5·6[10]			+ 0·4	+35·0		− 1·3[10]	+ 7·6	− 0·4	+ 8·7	+ 4·8		+15·7
A													
S													

[1] Data given may not be wholly consistent with that shown elsewhere in the publication.
[2] This index is given to one decimal place but this does not imply that it can be regarded as accurate to the last digit shown.
[3] See footnote [2] on page 12.
[4] All industries covered.
[5] Unemployed excluding school-leavers.
[6] Vacancies notified to employment offices.
[7] Purchased by manufacturing industry.
[8] Figure not available due to industrial action.
[9] Owing to industrial action by some Department of Employment staff the provisional estimate is based on returns or estimates received from only just over half the country.
[10] Provisional.

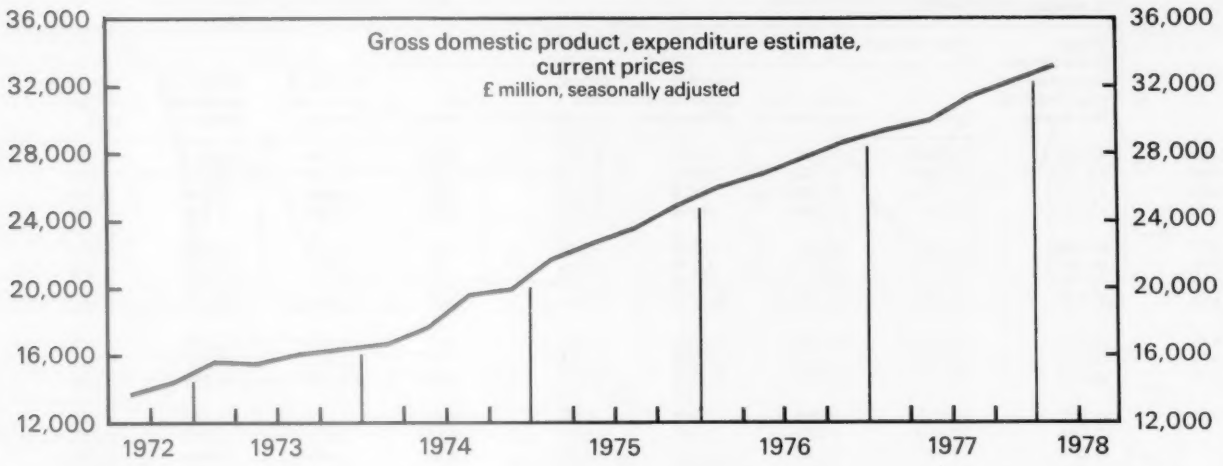
Tables and charts

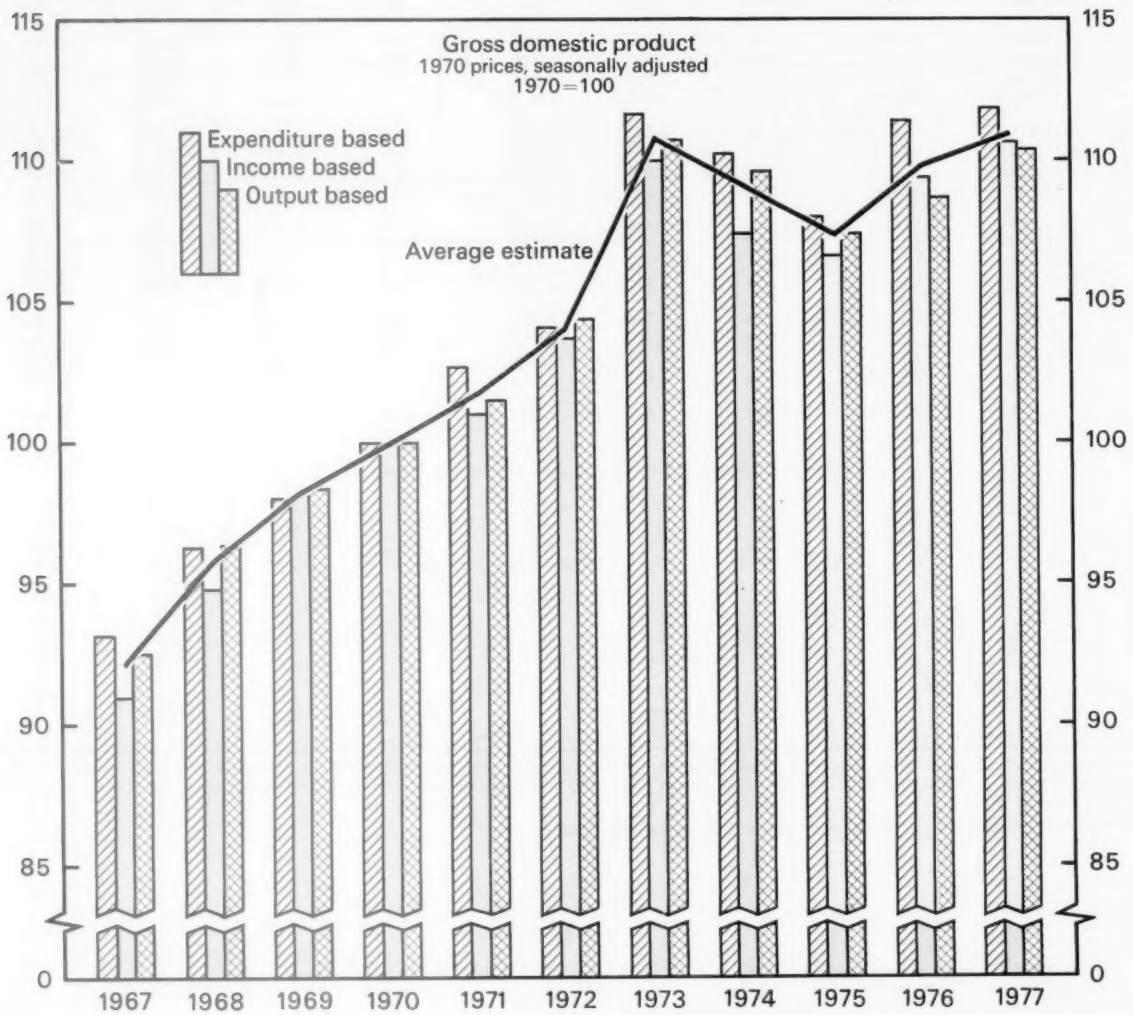
Gross domestic product at factor cost, total home costs and national disposable income revalued at 1970 market prices[1, 2]

Seasonally adjusted

	Gross domestic product at factor cost									Implied Index of total home costs	National disposable income
	At current prices				At 1970 factor cost						At 1970 market prices
	£ million		1970 =100		£ million	1970 =100				1970 =100	1970 =100
	Based on:		Based on:		Based on:	Based on:				Based on:	
	expenditure data	income data	expenditure data	income data	expenditure data	expenditure data §	income data[3] §	output data §	Average estimate §	expenditure data	Average estimate
1967	34,941	34,518	80·6	78·9	40,332	93·1	91·0	92·5	92·2	86·6	91·9
1968	37,416	37,177	86·4	85·0	41,746	96·3	94·8	96·4	95·9	89·6	94·8
1969	39,402	39,843	90·9	91·1	42,471	98·0	98·1	98·3	98·2	92·8	97·4
1970	43,327	43,756	100·0	100·0	43,327	100·0	100·0	100·0	100·0	100·0	100·0
1971	49,201	48,885	113·6	111·7	44,488	102·7	101·0	101·5	101·7	110·6	102·2
1972	54,986	55,343	126·9	126·5	45,060	104·0	103·6	104·4	104·0	122·0	105·0
1973	63,581	63,271	146·7	144·6	48,353	111·6	110·0	110·7	110·8	131·5	110·1
1974	73,656	72,463	170·0	165·6	47,757	110·2	107·4	109·6	109·1	154·1	104·4
1975	92,926	92,569	214·5	211·6	46,811	108·0	106·6	107·4	107·3	198·6	104·3
1976	109,104	108,097	251·8	247·0	48,270	111·4	109·3	108·7	109·8	226·0	106·8
1977	122,564	122,421	282·9	279·8	48,437	111·8	110·6	110·4	110·9	253·0	107·8
1973 *1*	15,741	15,199	145·3	138·9	12,350	114·0	109·0	110·6	111·2	127·5	110·8
2	15,461	15,624	142·8	142·8	12,085	111·6	111·7	110·2	111·2	127·9	
3	16,034	16,065	148·0	146·9	12,024	111·0	110·2	111·2	110·8	133·4	109·4
4	16,345	16,383	150·9	149·8	11,894	109·8	109·0	111·0	109·9	137·4	
1974 *1*	16,591	15,760	153·2	144·1	11,591	107·0	100·8	107·5	105·1	143·1	103·0
2	17,523	17,189	161·8	157·1	12,063	111·4	108·3	110·4	110·0	145·3	
3	19,565	19,281	180·6	176·3	12,243	113·0	110·4	111·3	111·6	159·8	105·9
4	19,977	20,233	184·4	184·9	11,860	109·5	110·0	109·3	109·6	168·4	
1975 *1*	21,728	21,374	200·6	195·4	11,919	110·0	107·2	109·2	108·8	182·3	104·5
2	22,679	22,547	209·4	206·1	11,742	108·4	106·8	107·3	107·5	193·2	
3	23,612	23,700	218·0	216·7	11,522	106·4	105·8	106·4	106·2	204·9	104·1
4	24,907	24,948	229·9	228·0	11,628	107·4	106·5	106·8	106·9	214·2	
1976 *1*	25,944	25,346	239·5	231·7	12,067	111·4	107·8	108·1	109·1	215·0	106·3
2	26,673	26,533	246·3	242·6	11,969	110·5	108·9	108·4	109·3	222·9	
3	27,759	27,575	256·3	252·1	12,036	111·1	109·3	108·3	109·6	230·6	107·4
4	28,728	28,643	265·2	261·8	12,198	112·6	111·2	110·2	111·3	235·5	
1977 *1*	29,310	29,227	270·6	267·2	12,035	111·1	109·7	110·6	110·5	243·6	106·6
2	29,889	30,054	275·9	274·7	12,120	111·9	111·4	109·5	110·9	246·6	
3	31,338	31,228	289·3	285·5	12,152	112·2	110·7	110·6	111·1	257·9	109·1
4	32,027	31,912	295·7	291·7	12,130	112·0	110·5	111·1	111·2	264·0	
1978 *1*	33,053	32,910	305·2	300·9	12,227	112·9	111·3	112·0	112·1	270·3	..
2											
	Percentage change, period on corresponding period of previous year										
1976 *1*	*+19·4*	*+18·6*	*+19·4*	*+18·6*	*+1·2*	*+1·2*	*+0·6*	*−1·0*	*+0·3*	*+17·9*	*+1·7*
2	*+17·6*	*+17·7*	*+17·6*	*+17·7*	*+1·9*	*+1·9*	*+2·0*	*+1·0*	*+1·7*	*+15·4*	
3	*+17·6*	*+16·4*	*+17·6*	*+16·4*	*+4·5*	*+4·5*	*+3·3*	*+1·8*	*+3·2*	*+12·5*	*+3·2*
4	*+15·3*	*+14·8*	*+15·3*	*+14·8*	*+4·9*	*+4·9*	*+4·4*	*+3·2*	*+4·1*	*+ 9·9*	
1977 *1*	*+13·0*	*+15·3*	*+13·0*	*+15·3*	*−0·3*	*−0·3*	*+1·8*	*+2·3*	*+1·3*	*+13·3*	*+0·3*
2	*+12·1*	*+13·3*	*+12·1*	*+13·3*	*+1·3*	*+1·3*	*+2·3*	*+1·0*	*+1·5*	*+10·6*	
3	*+12·9*	*+13·2*	*+12·9*	*+13·2*	*+1·0*	*+1·0*	*+1·3*	*+2·1*	*+1·4*	*+11·8*	*+1·6*
4	*+11·5*	*+11·4*	*+11·5*	*+11·4*	*−0·6*	*−0·6*	*−0·6*	*+0·8*	*−0·1*	*+12·1*	
1978 *1*	*+12·8*	*+12·6*	*+12·8*	*+12·6*	*+1·6*	*+1·6*	*+1·5*	*+1·3*	*+1·4*	*+11·0*	
2											

[1] The index numbers are given to one decimal place but this does not imply that they can be regarded as accurate to the last digit shown.
[2] Introduced in an article on page xxviii *Economic Trends*, No. 255, January 1975.
[3] Income data deflated by the implied index of total home costs.


Gross domestic product, expenditure estimate,
current prices
£ million, seasonally adjusted
36,000
32,000
28,000
24,000
20,000
16,000
12,000
1972
1973
1974
1975
1976
1977
1978


Gross domestic product
1970 prices, seasonally adjusted
1970=100
Expenditure based
Income based
Output based
Average estimate
115
110
105
100
95
90
85
0
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977

8

Expenditure on the gross domestic product

Seasonally adjusted

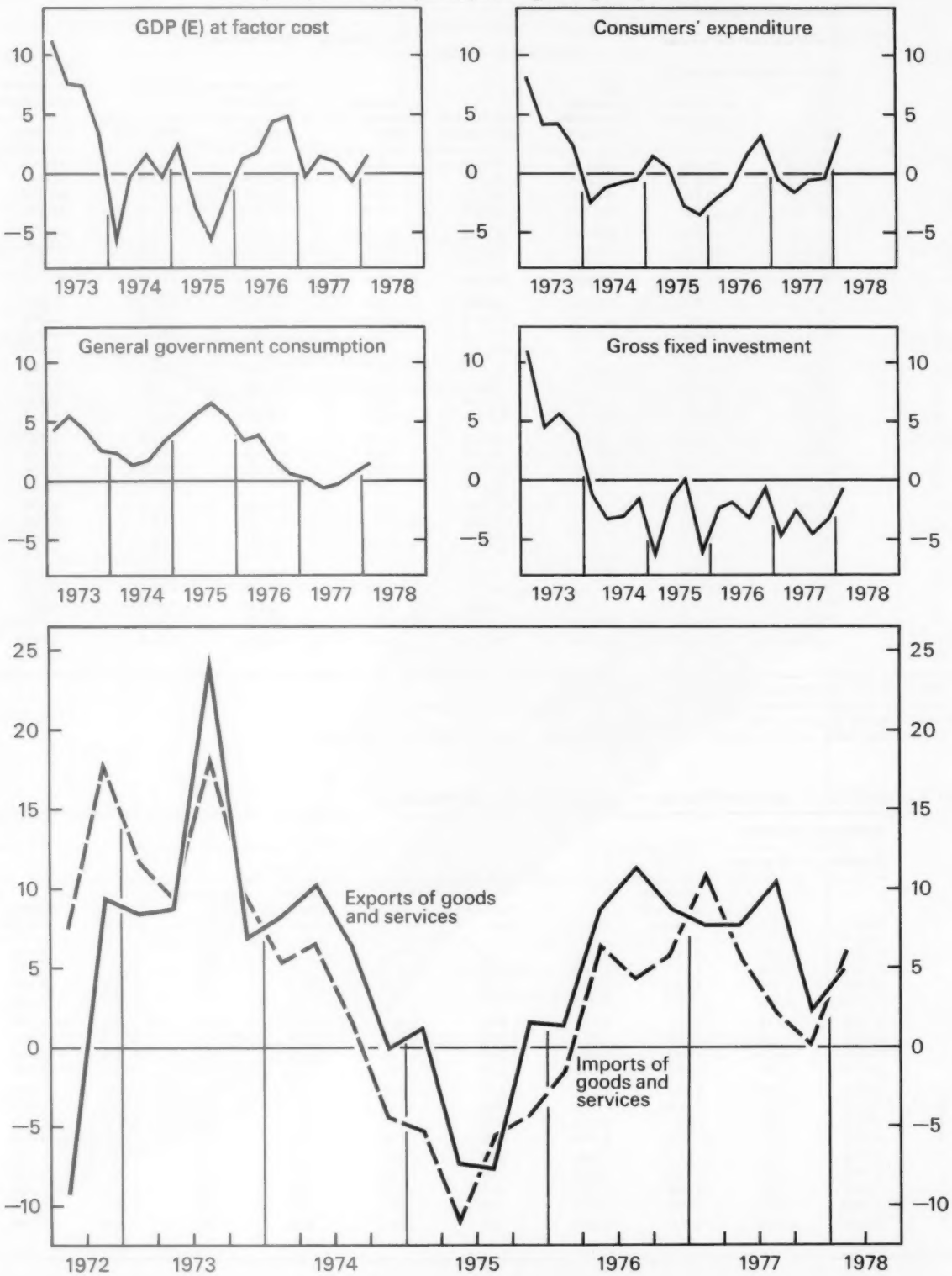
£ million, 1970 prices

	Gross domestic product at factor cost (expenditure based)	Final expenditure on goods and services at market prices							
		Total	Consumers' expenditure§	General government consumption	Gross fixed investment[1]§	Stock building§	Exports of goods and services§	Imports of goods and services[1]§	Adjustment to factor cost
1967	40,332	56,949	29,942	8,973	8,780	390	8,864	9,502	7,115
1968	41,746	59,240	30,674	9,004	9,182	482	9,898	10,216	7,278
1969	42,471	60,282	30,888	8,836	9,216	480	10,862	10,559	7,252
1970	43,327	61,967	31,668	8,964	9,453	416	11,466	11,101	7,539
1971	44,488	63,965	32,677	9,228	9,625	112	12,323	11,660	7,817
1972	45,060	66,316	34,519	9,626	9,636	35	12,500	12,840	8,416
1973	48,353	71,717	36,132	10,020	10,233	1,365	13,967	14,393	8,971
1974	47,757	71,293	35,682	10,233	10,001	561	14,816	14,681	8,855
1975	46,811	69,218	35,269	10,794	9,640	— 842	14,357	13,689	8,718
1976	48,270	71,428	35,406	11,050	9,444	97	15,431	14,207	8,951
1977	48,437	72,220	35,116	11,057	9,087	444	16,516	14,858	8,925
1973 *1*	12,350	18,014	9,091	2,489	2,635	462	3,337	3,439	2,225
2	12,085	17,819	8,965	2,498	2,512	424	3,420	3,502	2,232
3	12,024	17,937	9,061	2,513	2,533	262	3,568	3,649	2,264
4	11,894	17,947	9,015	2,520	2,553	217	3,642	3,803	2,250
1974 *1*	11,591	17,458	8,848	2,544	2,604	— 149	3,611	3,623	2,244
2	12,063	17,942	8,867	2,529	2,428	341	3,777	3,730	2,149
3	12,243	18,164	8,993	2,555	2,454	371	3,791	3,696	2,225
4	11,860	17,729	8,974	2,605	2,515	— 2	3,637	3,632	2,237
1975 *1*	11,919	17,549	8,995	2,656	2,433	— 197	3,662	3,428	2,202
2	11,742	17,224	8,901	2,671	2,392	— 241	3,501	3,314	2,168
3	11,522	17,186	8,731	2,721	2,459[1]	— 224	3,499	3,490	2,174
4	11,628	17,259	8,642	2,746	2,356	— 180	3,695	3,457	2,174
1976 *1*	12,067	17,643	8,806	2,746	2,378	— 1	3,714	3,380	2,196
2	11,969	17,709	8,793	2,775	2,346[1]	— 12	3,807	3,529	2,211
3	12,036	17,925	8,879	2,769	2,377[1]	5	3,895	3,642	2,247
4	12,198	18,151	8,928	2,760	2,343	105	4,015	3,656	2,297
1977 *1*	12,035	18,000	8,758	2,750	2,259	234	3,999	3,750	2,215
2	12,120	18,024	8,639	2,762	2,292	229	4,102	3,728	2,176
3	12,152	18,131	8,829	2,764	2,265	— 30	4,303	3,718	2,261
4	12,130	18,065	8,890	2,781	2,271	11	4,112	3,662	2,273
1978 *1*	12,227	18,552	9,084	2,790	2,245	249	4,184	3,985	2,340
2							(4,276)[2]	(3,907)[2]	
	Percentage change, quarter on corresponding quarter of previous year								
1976 *1*	*+1·2*	*+0·5*	*−2·1*	*+3·4*	*−2·3*	..	*+1·4*	*−1·4*	*−0·3*
2	*+1·9*	*+2·8*	*−1·2*	*+3·9*	*−1·9*	..	*+8·7*	*+6·5*	*+2·0*
3	*+4·5*	*+4·3*	*+1·7*	*+1·8*	*−3·3*	..	*+11·3*	*+4·4*	*+3·4*
4	*+4·9*	*+5·2*	*+3·3*	*+0·5*	*−0·6*	..	*+8·7*	*+5·8*	*+5·7*
1977 *1*	*−0·3*	*+2·0*	*−0·5*	*+0·1*	*−5·0*	..	*+7·7*	*+10·9*	*+0·9*
2	*+1·3*	*+1·8*	*−1·8*	*−0·5*	*−2·3*	..	*+7·7*	*+5·6*	*−1·6*
3	*+1·0*	*+1·1*	*−0·6*	*−0·2*	*−4·7*	..	*+10·5*	*+2·1*	*+0·6*
4	*−0·6*	*−0·5*	*−0·4*	*+0·8*	*−3·1*	..	*+2·4*	*+0·2*	*+1·0*
1978 *1*	*+1·6*	*+3·1*	*+3·7*	*+1·5*	*−0·6*	..	*+4·6*	*+6·3*	*+5·6*
2							*(+4·2)*[2]	*(+4·8)*[2]	

[1] Including extra capital formation in imported oil platforms and related equipment delivered during the quarter but not adjusted for seasonality. The extra deliveries are approximately £100 million in 3rd quarter 1975, £60 million in 2nd quarter 1976, £50 million in 3rd quarter 1976 and £90 million in 2nd quarter of 1977.

[2] The figures in brackets are preliminary estimates and are partially forecast.

1970 prices, seasonally adjusted, percentage change on year earlier



Personal disposable income and consumption

Seasonally adjusted

	£ million, current prices				Percentage	1970 prices		
	Personal income before tax					Real personal disposable income [4]		Real consumers' expenditure §
	Total [1]	*of which:* Wages and salaries	Total personal disposable income [2]	Consumers' expenditure	Personal saving ratio [3]	£ million §	1970=100	£ million
1970	43,313	26,984	34,775	31,668	8·9	34,775	100·0	31,668
1971	47,953	29,673	38,681	35,411	8·5	35,695	102·6	32,677
1972	54,532	33,141	44,550	39,929	10·4	38,514	110·7	34,519
1973	63,098	38,024	51,289	45,204	11·9	40,996	117·9	36,132
1974	76,142	45,856	60,626	51,962	14·3	41,632	119·7	35,682
1975	96,879	59,300	74,847	63,303	15·4	41,701	119·9	35,269
1976	112,404	67,185	86,293	73,424	14·9	41,612	119·6	35,406
1977	125,154	73,765	97,251	83,204	14·4	41,045	118·0	35,116
1973 *1*	14,885	8,950	12,056	10,994	8·8	9,973	114·7	9,091
2	15,680	9,447	12,757	11,044	13·4	10,359	119·2	8,965
3	15,977	9,688	13,015	11,433	12·2	10,318	118·7	9,061
4	16,556	9,939	13,461	11,733	12·8	10,346	119·0	9,015
1974 *1*	17,203	10,182	13,862	12,025	13·3	10,207	117·4	8,848
2	18,082	10,913	14,483	12,652	12·6	10,158	116·8	8,867
3	19,698	11,861	15,633	13,368	14·5	10,524	121·1	8,993
4	21,159	12,900	16,648	13,917	16·4	10,743	123·6	8,974
1975 *1*	22,553	13,981	17,509	14,709	16·0	10,708	123·2	8,995
2	23,660	14,426	18,322	15,698	14·3	10,389	119·5	8,901
3	24,906	15,237	19,219	16,241	15·5	10,332	118·8	8,731
4	25,760	15,656	19,797	16,655	15·9	10,272	118·2	8,642
1976 *1*	26,965	16,085	20,742	17,478	15·8	10,448	120·2	8,806
2	27,593	16,533	20,976	17,906	14·6	10,299	118·5	8,793
3	28,384	17,053	22,048	18,646	15·4	10,497	120·7	8,879
4	29,462	17,514	22,527	19,394	13·9	10,368	119·2	8,928
1977 *1*	30,443	17,934	23,356	19,897	14·8	10,281	118·3	8,758
2	30,643	18,113	23,585	20,322	13·8	10,026	115·3	8,639
3	31,413	18,512	24,453	21,312	12·9	10,131	116·5	8,829
4	32,655	19,206	25,857	21,673	16·2	10,607	122·0	8,890
1978 *1*	33,709	19,880	26,315	22,611	14·1	10,572	121·6	9,084
2								

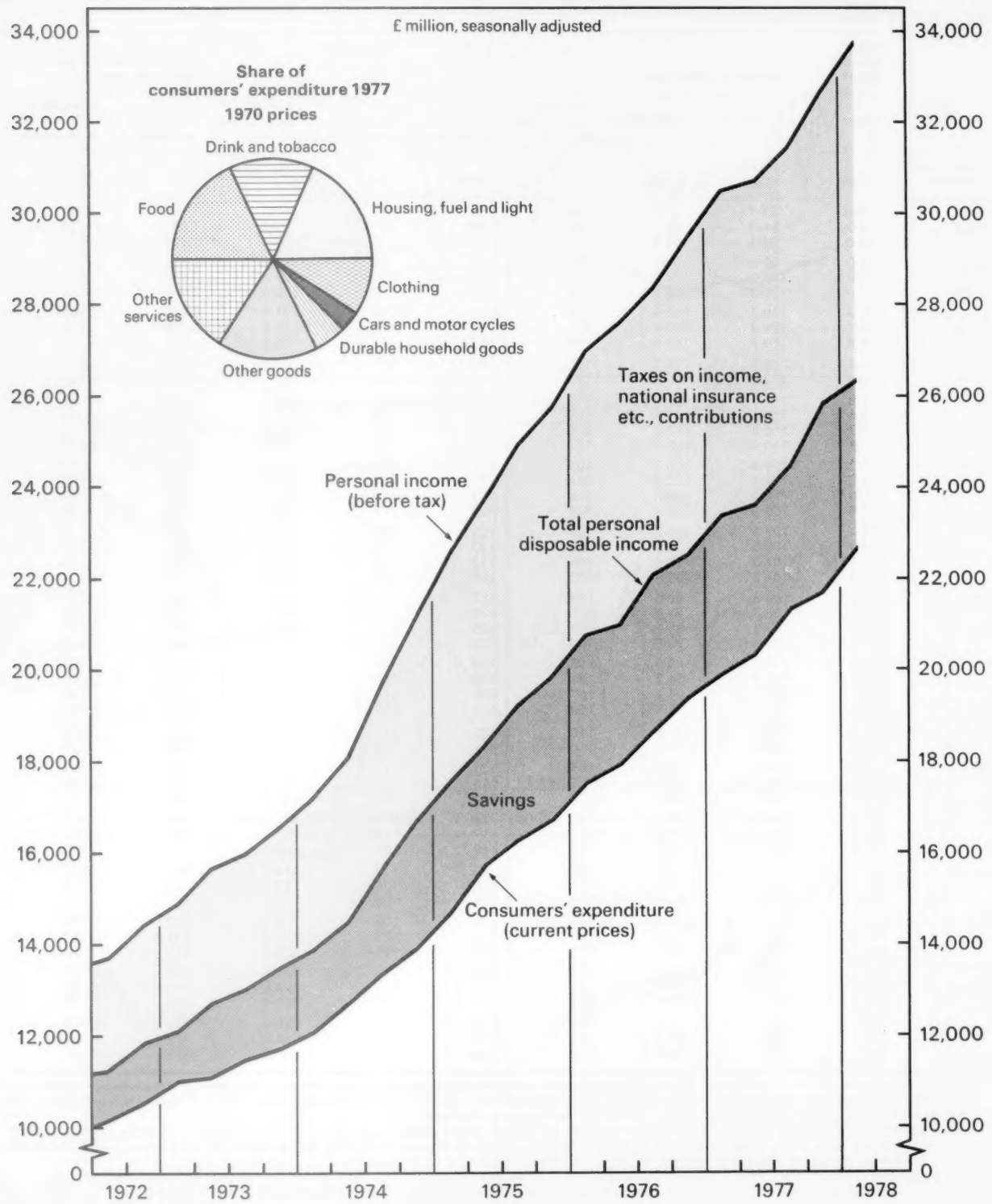
[1] Before providing for depreciation and stock appreciation.
[2] Before providing for depreciation, stock appreciation and additions to tax reserves.
[3] Personal saving as a percentage of personal disposable income.
[4] Personal disposable income revalued by the implied consumers' expenditure deflator (1970=100).

Real consumers' expenditure — component categories

Seasonally adjusted

£ million, 1970 prices

	Total §	Food	Alcoholic drink and tobacco	Housing	Fuel and light	Clothing including footwear	Durable household goods	Cars and motor cycles	Other goods	Other services
1970	31,668	6,383	4,019	4,061	1,495	2,753	1,411	997	4,806	5,743
1971	32,677	6,414	4,112	4,166	1,480	2,800	1,537	1,329	4,966	5,873
1972	34,519	6,362	4,389	4,233	1,535	2,965	1,854	1,588	5,443	6,150
1973	36,132	6,460	4,854	4,394	1,574	3,114	2,074	1,515	5,865	6,282
1974	35,682	6,419	4,911	4,504	1,616	3,087	1,967	1,059	5,935	6,184
1975	35,269	6,424	4,808	4,577	1,596	3,143	1,910	1,057	5,756	5,998
1976	35,406	6,478	4,844	4,686	1,592	3,184	1,988	1,168	5,782	5,684
1977	35,116	6,399	4,719	4,786	1,636	3,263	1,958	1,159	5,573	5,623
1976 *1*	8,806	1,618	1,164	1,156	421	778	487	315	1,445	1,422
2	8,793	1,615	1,208	1,168	383	795	492	269	1,441	1,422
3	8,879	1,634	1,240	1,178	379	805	503	274	1,444	1,422
4	8,928	1,611	1,232	1,184	409	806	506	310	1,452	1,418
1977 *1*	8,758	1,594	1,153	1,183	411	806	478	313	1,429	1,391
2	8,639	1,608	1,160	1,193	426	786	471	248	1,351	1,396
3	8,829	1,553	1,206	1,200	403	835	504	298	1,399	1,431
4	8,890	1,644	1,200	1,210	396	836	505	300	1,394	1,405
1978 *1*	9,084	1,633	1,271	1,208	427	853	539	362	1,406	1,385
2										


£ million, seasonally adjusted
34,000
32,000
30,000
28,000
26,000
24,000
22,000
20,000
18,000
16,000
14,000
12,000
10,000
0
1972
1973
1974
1975
1976
1977
1978
Share of consumers' expenditure 1977 1970 prices
Drink and tobacco
Housing, fuel and light
Clothing
Cars and motor cycles
Durable household goods
Other goods
Other services
Food
Taxes on income, national insurance etc., contributions
Personal income (before tax)
Total personal disposable income
Savings
Consumers' expenditure (current prices)

Retail sales, new registrations of cars and hire purchase debt (Great Britain)

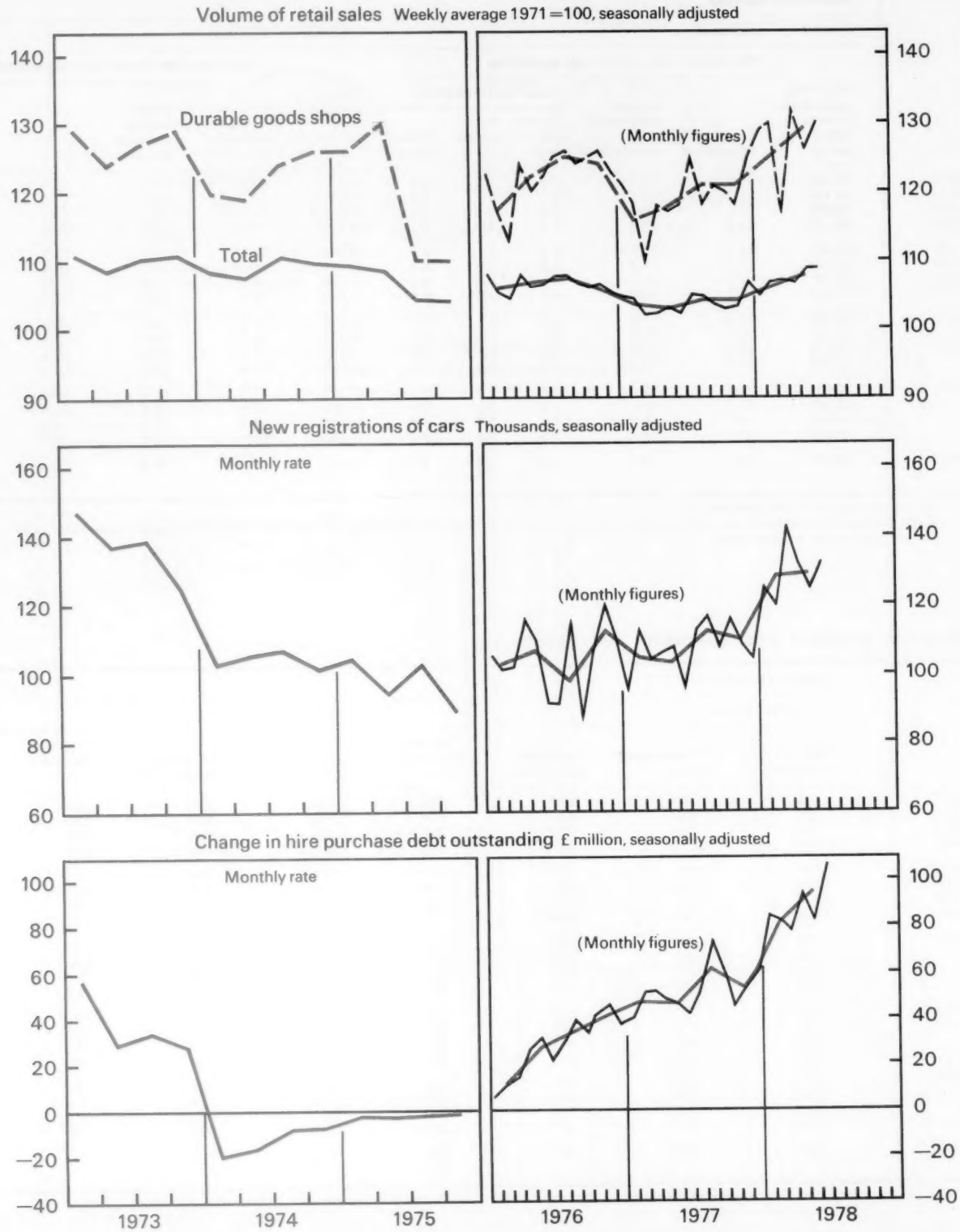
	Seasonally adjusted								
	Weekly average 1971=100						Thousands[1]	£ million	
	Value of retail sales[2]	Volume of retail sales[2]						Hire purchase and other instalment credit[3,4]	
	Total[5] §	Total[5] §	Food shops[5] §	Clothing and footwear shops §	Durable goods shops §	Other non-food shops §	New registrations of cars §	New credit extended	Changes in debt outstanding
Sales in 1971 £ million	*16,296*	*16,296*	*6,866*	*2,436*	*1,897*	*5,097*			
1967	73·8	92·7	97·4	89	84	92	93·1	1,556	− 40
1968	79·3	95·7	98·9	93	89	95	93·1	1,643	+ 46
1969	84·0	96·2	100·5	93	87	95	82·3	1,587	− 20
1970	91·0	98·4	101·1	97	91	98	91·4	1,775	+ 84
1971	100·0	100·0	100·0	100	100	100	108·5	2,036	+251
1972	112·0	105·3	101·6	104	113	108	138·6	2,466	+438
1973	126·9	110·3	101·6	108	127	117	137·1	2,846	+444
1974	146·7	109·0	102·4	106	122	115	102·8	2,508	−164
1975	174·4	106·7	100·0	106	119	111	97·2	2,981	− 13
1976	200·1	106·5	98·7	106	122	111	104·7	3,586	+343
1977	228·0	103·6	94·8	105	119	109	107·1	4,392	+625
1973 *1*	122·9	111·0	101·2	114	129	116	147·3	739	+169
2	122·8	108·8	101·6	105	124	114	137·7	681	+ 89
3	128·2	110·3	102·1	106	127	117	138·8	718	+102
4	133·9	110·9	101·5	107	129	119	124·8	708	+ 84
1974 *1*	136·2	108·4	100·7	105	120	116	102·6	568	− 59
2	141·8	107·7	102·0	103	119	113	104·9	615	− 52
3	151·0	110·3	103·9	108	124	115	106·6	651	− 28
4	158·0	109·8	103·1	106	126	115	100·6	674	− 25
1975 *1*	165·2	109·5	101·7	109	126	114	104·2	710	− 6
2	175·0	108·5	99·9	106	130	113	93·5	752	+ 9
3	176·6	104·3	98·9	105	110	109	102·9	749	− 9
4	181·5	104·2	99·3	103	110	109	88·4	770	− 7
1976 *1*	189·6	105·9	99·5	105	117	111	102·7	833	+ 37
2	196·1	106·9	99·6	106	122	111	106·7	872	+ 79
3	203·4	107·3	99·1	106	125	112	96·8	913	+100
4	211·4	105·9	96·6	105	124	112	112·5	968	+127
1977 *1*	216·4	103·3	94·9	105	116	109	103·8	1,007	+144
2	222·0	102·5	94·7	101	118	108	103·0	1,047	+136
3	234·2	104·3	94·4	107	121	110	112·0	1,149	+186
4	239·4	104·4	95·3	109	121	109	109·5	1,189	+159
1978 *1*	246·0	106·3	96·6	110	125	111	129·0	1,260	+245
2	254·4	108·0	98·1	110	129	112	129·6	1,393	+281
1977 *J*	215·7	104·5	95·2	106	121	110	94·7	323	+ 40
F	217·4	104·0	95·2	105	118	110	112·7	339	+ 52
M	216·1	101·7	94·4	103	109	108	103·8	345	+ 52
A	219·9	102·3	94·3	101	118	107	106·0	346	+ 48
M	222·9	103·2	95·0	104	117	109	107·8	356	+ 46
J	222·9	102·1	94·7	99	118	107	95·3	345	+ 42
J	231·5	104·8	94·3	107	125	110	112·6	360	+ 51
A	235·8	104·7	94·4	110	118	111	116·4	402	+ 75
S	235·0	103·5	94·4	106	121	108	107·1	387	+ 60
O	234·2	102·7	94·2	103	120	108	116·1	378	+ 45
N	236·3	103·1	93·9	107	118	108	108·3	401	+ 53
D	246·0	106·9	97·3	114	125	110	104·2	410	+ 61
1978 *J*	241·0	104·9	95·1	105	129	109	124·8	429	+ 85
F	246·5	106·8	96·8	109	130	111	119·8	418	+ 82
M	249·8	107·0	97·6	115	117	112	142·5	413	+ 78
A	250·3	106·7	96·5	108	132	111	131·8	463	+ 93
M	255·2	108·4	98·9	113	126	112	124·2	471	+ 82
J	257·1	108·6	98·6	110	130	113	132·7	459	+106

[1] Monthly averages. [2] Monthly figures of retail sales are based on four-week periods, except for the months of March, June, September and December which are five-week periods. Because of timing differences January 1975 is exceptionally a five-week period. Further details are given in the technical note to the retail sales figures on page 716 of *Trade and Industry*, 14 March 1975.

[3] Credit extended by and repaid to finance houses and retailers, i.e. durable goods shops, department stores (including co-operatve societies), other general stores and general mail order houses. The figures for retailers have been rebased from 1971 on the results of the Census of Distribution for 1971. For further details see *Trade and Industry*, 10 February 1978.

[4] The seasonal adjustments have been revised in the light of subsequent experience.

[5] These indices are given to one decimal place but this does not imply that they can be regarded as accurate to the last digit shown.


Volume of retail sales Weekly average 1971 =100, seasonally adjusted
Durable goods shops
Total
(Monthly figures)
140
130
120
110
100
90
New registrations of cars Thousands, seasonally adjusted
Monthly rate
(Monthly figures)
160
140
120
100
80
60
Change in hire purchase debt outstanding £ million, seasonally adjusted
Monthly rate
(Monthly figures)
100
80
60
40
20
0
−20
−40
1973
1974
1975
1976
1977
1978

Shares of income and expenditure

Seasonally adjusted

	£ million	Per cent					£ million	Per cent		
		Percentage share of total final expenditure						Percentage share of total domestic income		
	Total final expenditure (current market prices)	Consumers' expenditure	General government final consumption	Gross fixed investment: General government	Gross fixed investment: Public corporations	Gross fixed investment: Private sector	Total domestic income (current prices)[1]	Income from employment	Gross trading profits of companies[1]	Other[1,2]
1970	61,967	51·1	14·4	3·9	2·7	8·6	44,882	67·8	13·2	19·0
1971	69,167	51·2	14·7	3·7	2·7	8·8	49,973	67·3	13·4	19·2
1972	76,805	52·0	15·2	3·6	2·3	9·2	56,646	67·0	13·2	19·8
1973	91,178	49·6	14·5	4·0	2·3	9·1	66,482	65·5	13·7	20·8
1974	109,452	47·5	15·1	4·0	2·6	8·9	78,849	66·8	12·3	20·9
1975	132,171	47·9	17·3	3·8	3·0	8·9	97,911	70·1	10·0	19·9
1976	158,766	46·3	16·7	3·4	3·0	8·4	114,760	68·5	10·8	20·6
1977	181,911	45·7	16·0	2·6	2·6	8·6	127,016	67·9	11·3	20·7
1976 *1*	36,969	47·3	17·0	3·8	3·3	8·2	26,806	69·8	9·6	20·6
2	38,721	46·2	17·0	3·5	3·0	8·4	28,210	68·7	10·7	20·6
3	40,625	45·9	16·7	3·3	2·8	8·8	29,289	68·3	10·9	20·8
4	42,451	45·7	16·2	3·2	2·9	8·2	30,455	67·4	12·0	20·6
1977 *1*	43,434	45·8	16·0	3·1	2·8	8·0	31,175	67·3	11·9	20·8
2	44,981	45·2	16·1	2·5	2·5	8·9	31,264	67·8	11·4	20·8
3	46,566	45·7	16·0	2·4	2·5	8·7	32,017	67·8	11·3	20·9
4	46,930	46·2	16·1	2·5	2·5	8·9	32,560	68·9	10·8	20·3
1978 *1*	48,697	46·4	16·1	2·5	2·1	9·0	33,685	68·8	10·8	20·4
2										

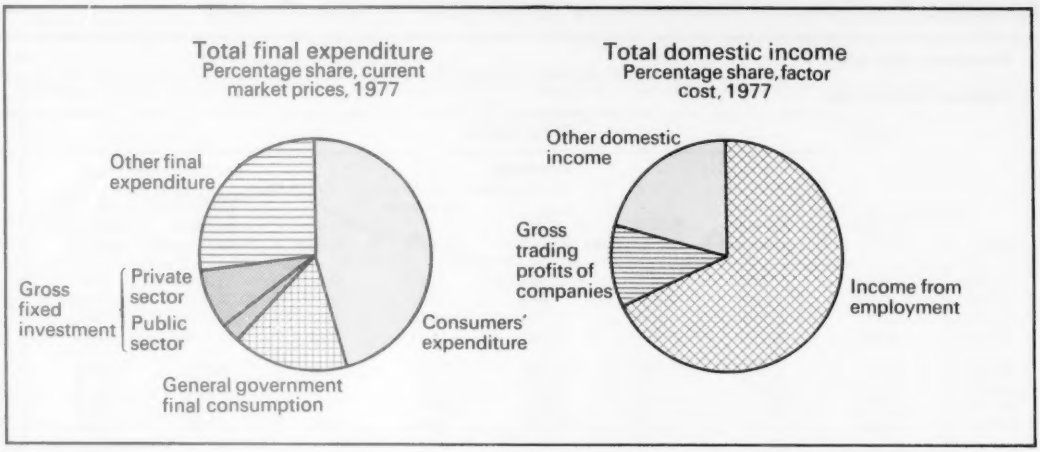
[1] Before providing for stock appreciation.
[2] Gross trading surplus of public corporations and general government enterprises, income from rent and self-employment, and imputed charge for consumption of non-trading capital.

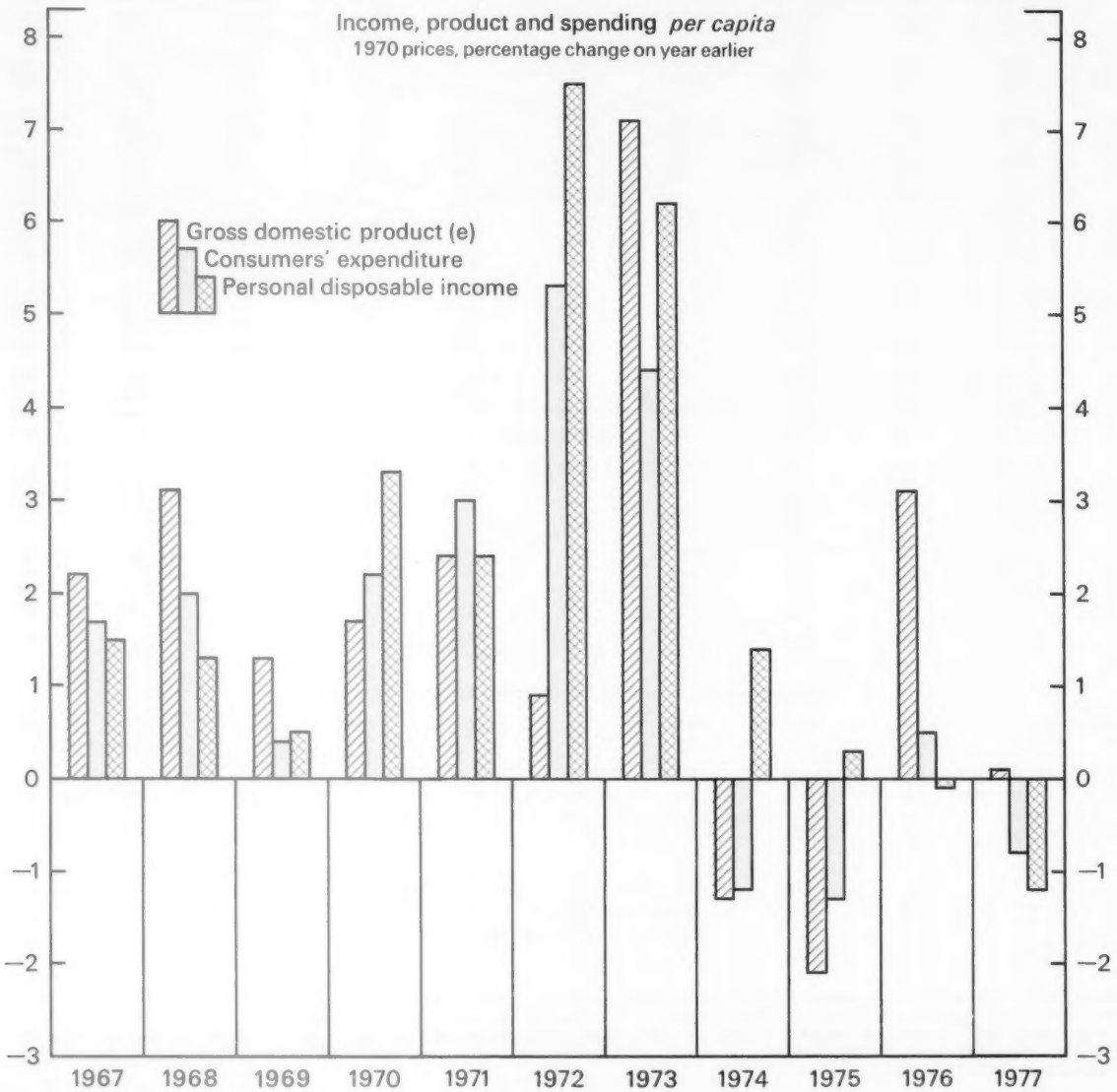
Income, product and spending *per capita*

Seasonally adjusted

	£, current prices				£, 1970 prices		
	Gross national product[1]	Gross domestic product[1,2]	Consumers' expenditure	Personal disposable income	Gross domestic product[1,2]	Consumers' expenditure	Personal disposable income
1970	790	780	570	626	780	570	626
1971	892	883	636	694	799	587	641
1972	994	984	715	797	806	618	689
1973	1,159	1,135	807	916	863	645	732
1974	1,337	1,314	927	1,082	852	637	743
1975	1,674	1,658	1,130	1,336	835	629	744
1976	1,974	1,947	1,311	1,540	862	632	743
1977	2,196	2,189	1,486	1,739	865	627	733
1975 *1*	391	387	263	312	213	160	191
2	408	405	280	327	209	159	186
3	426	422	290	343	206	156	184
4	449	444	297	354	207	154	183
1976 *1*	469	463	312	370	215	157	187
2	482	476	320	374	214	157	184
3	503	495	333	394	215	159	187
4	520	513	346	402	218	159	185
1977 *1*	527	523	355	417	215	156	184
2	534	534	363	421	216	154	179
3	562	560	381	437	217	158	181
4	573	572	387	462	217	159	189
1978 *1*	593	591	404	470	218	162	189
2							

[1] At factor cost. [2] Based on expenditure data.


Total final expenditure
Percentage share, current market prices, 1977
Other final expenditure
Gross fixed investment
Private sector
Public sector
Consumers' expenditure
General government final consumption
Total domestic income
Percentage share, factor cost, 1977
Other domestic income
Gross trading profits of companies
Income from employment


Income, product and spending *per capita*
1970 prices, percentage change on year earlier
Gross domestic product (e)
Consumers' expenditure
Personal disposable income
8
7
6
5
4
3
2
1
0
−1
−2
−3
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977

Gross domestic fixed capital formation by sector and by type of asset

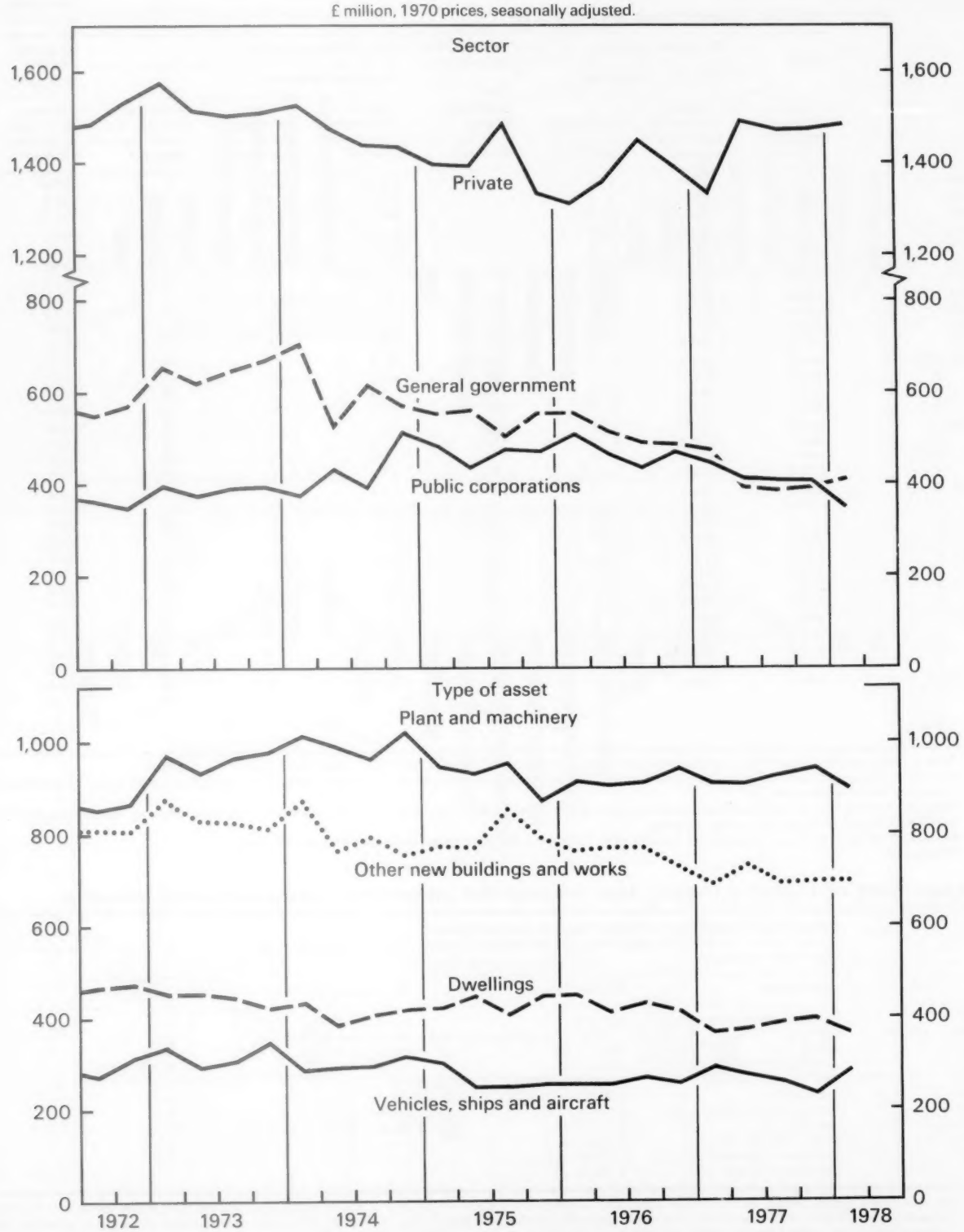
Seasonally adjusted

£ million, 1970 prices

	Sector[1]				Type of asset					
					Dwellings					
	Total§	Private sector	General government	Public corporations	Total	of which: Private	of which: Public	Other new building and works[2]	Vehicles ships and aircraft	Plant and machinery
1967	8,780	4,488	2,316	1,976	1,784	915	869	2,879	752	3,365
1968	9,182	4,906	2,432	1,844	1,868	957	911	3,020	928	3,366
1969	9,216	5,211	2,390	1,615	1,785	894	891	3,050	912	3,469
1970	9,453	5,343	2,431	1,679	1,643	841	802	3,173	979	3,658
1971	9,625	5,586	2,351	1,688	1,749	1,009	740	3,263	1,013	3,600
1972	9,636	5,897	2,253	1,486	1,838	1,151	687	3,210	1,156	3,432
1973	10,233	6,106	2,571	1,556	1,772	1,045	727	3,338	1,283	3,840
1974	10,001	5,868	2,419	1,714	1,639	855	784	3,186	1,198	3,978
1975	9,640	5,603	2,172	1,865	1,713	915	798	3,177	1,051	3,699
1976	9,444	5,515	2,053	1,876	1,712	883	829	3,026	1,039	3,667
1977	9,087	5,772	1,648	1,667	1,523	810	713	2,821	1,032	3,681
1971 *3*	2,418	1,437	567	414	439	262	177	814	252	913
4	2,425	1,403	601	421	450	267	183	840	242	893
1972 *1*	2,376	1,399	572	405	450	278	172	785	289	852
2	2,409	1,476	560	373	453	276	177	808	284	864
3	2,396	1,485	550	361	462	298	164	809	272	853
4	2,455	1,537	571	347	473	299	174	808	311	863
1973 *1*	2,635	1,578	658	399	454	274	180	876	337	968
2	2,512	1,516	620	376	456	277	179	827	295	934
3	2,533	1,502	643	388	441	253	188	823	306	963
4	2,553	1,510	650	393	421	241	180	812	345	975
1974 *1*	2,604	1,522	705	377	436	236	200	872	286	1,010
2	2,428	1,473	524	431	383	207	176	761	296	988
3	2,454	1,439	619	396	401	188	213	795	298	960
4	2,515	1,434	571	510	419	224	195	758	318	1,020
1975 *1*	2,433	1,397	554	482	420	224	196	769	300	944
2	2,392	1,393	560	439	445	239	206	767	248	932
3	2,459[3]	1,481[3]	503	475	406	227	179	853[3]	248	952
4	2,356	1,332	555	469	442	225	217	788	255	871
1976 *1*	2,378	1,313	557	508	448	230	218	761	256	913
2	2,346[3]	1,360[3]	519	467	418	211	207	768[3]	256	904
3	2,377[3]	1,448[3]	492	437	430	228	202	768[3]	269	910
4	2,343	1,394	485	464	416	214	202	729	258	940
1977 *1*	2,259	1,335	477	447	366	175	191	694	291	908
2	2,292[3]	1,490[3]	392	410	376	202	174	734[3]	276	906
3	2,265	1,472	385	408	385	214	171	695	259	926
4	2,271	1,475	394	402	396	219	177	698	236	941
1978 *1*	2,245	1,486	408	351	365	195	170	699	284	897
2										
	Percentage change, quarter on corresponding quarter of previous year									
1975 *3*	*+0·2*	*+2·9*	*−18·7*	*+19·9*	*+ 1·2*	*+20·7*	*−16·0*	*+ 7·3*	*−16·8*	*− 0·8*
4	*−6·3*	*−7·1*	*− 2·8*	*− 8·0*	*+ 5·5*	*+ 0·4*	*+11·3*	*+ 4·0*	*−19·2*	*−14·2*
1976 *1*	*−2·3*	*−6·0*	*+ 0·5*	*+ 5·4*	*+ 6·7*	*+ 2·7*	*+11·2*	*− 1·0*	*−14·7*	*− 3·3*
2	*−1·9*	*−2·4*	*− 7·3*	*+ 6·4*	*− 6·1*	*−11·7*	*+ 0·5*	*+ 0·1*	*+ 3·2*	*− 3·0*
3	*−3·3*	*−2·2*	*− 2·2*	*− 8·0*	*+ 5·9*	*+ 0·4*	*+12·8*	*−10·0*	*+ 8·5*	*− 4·4*
4	*−0·6*	*+4·7*	*−12·6*	*− 1·1*	*− 5·9*	*− 4·9*	*− 6·9*	*− 7·5*	*+ 1·2*	*+ 7·9*
1977 *1*	*−5·0*	*+1·7*	*−14·4*	*−12·0*	*−18·3*	*−23·9*	*−12·4*	*− 8·8*	*+13·7*	*− 0·5*
2	*−2·3*	*+9·6*	*−24·5*	*−12·2*	*−10·0*	*− 4·3*	*−15·9*	*− 4·4*	*+ 7·8*	*+ 0·2*
3	*−4·7*	*+1·7*	*−21·7*	*− 6·6*	*−10·5*	*− 6·1*	*−15·3*	*− 9·5*	*− 3·7*	*+ 1·8*
4	*−3·1*	*+5·8*	*−18·8*	*−13·4*	*− 4·8*	*+ 2·3*	*−12·4*	*− 4·3*	*− 8·5*	*+ 0·1*
1978 *1*	*−0·6*	*+11·3*	*−14·5*	*+21·5*	*− 0·3*	*+11·4*	*−11·0*	*+ 0·7*	*− 2·4*	*− 1·2*
2										

[1] Including purchases *less* sales of land and existing buildings. [2] Including transfer costs of land and buildings.
[3] Including extra capital formation in imported oil platforms and related equipment delivered during the quarter but not adjusted for seasonality. The extra deliveries are approximately £100 million in 3rd quarter 1975, £60 million in 2nd quarter 1976, £50 million in 3rd quarter 1976 and £75 million in 2nd quarter 1977.

£ million, 1970 prices, seasonally adjusted.



Indicators of fixed investment by manufacturing industry

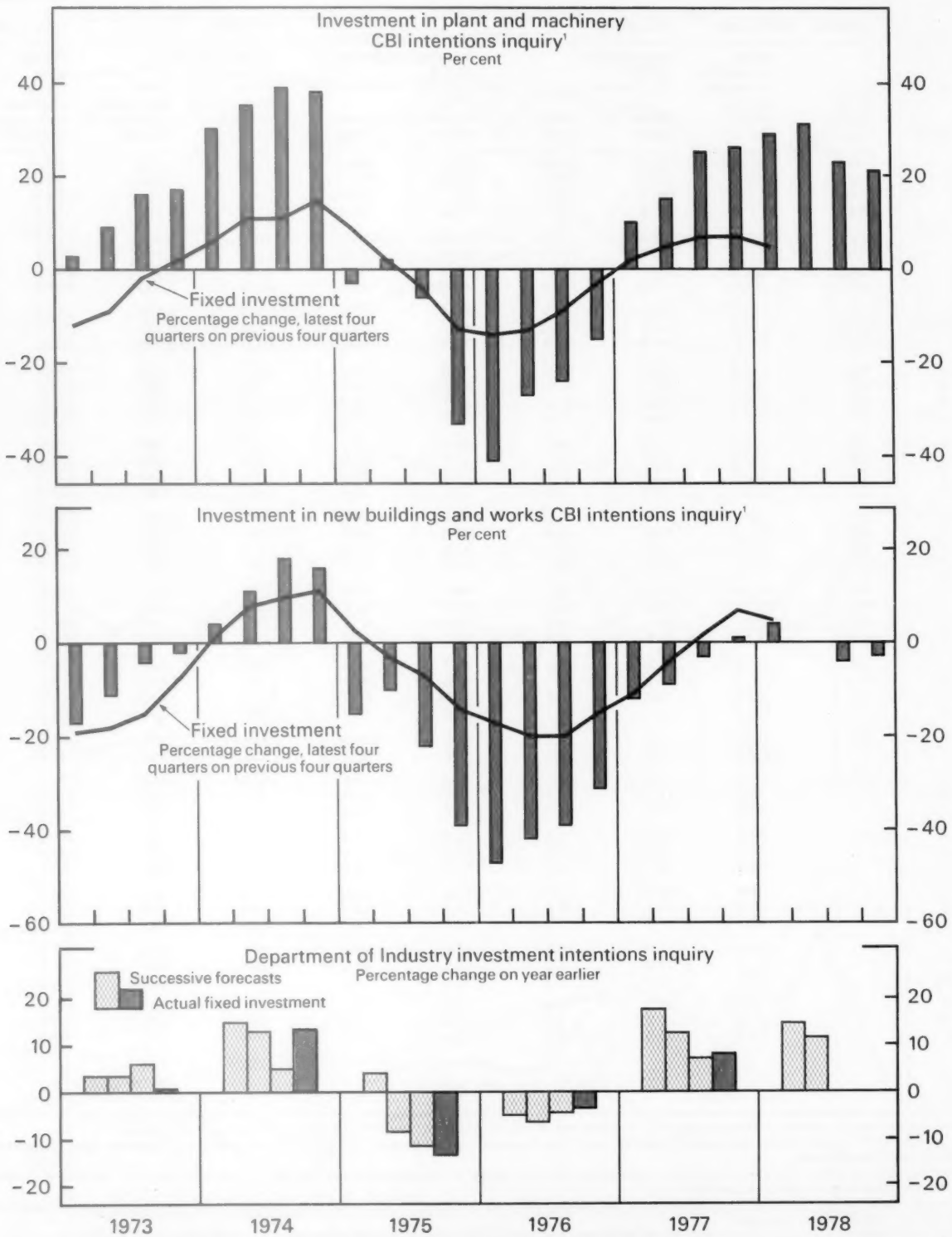
	Gross fixed investment in manufacturing industry							New orders received by contractors for private industrial work (GB)[1,2,3]
	Total§	Plant and machinery			New building and works			
		Gross fixed investment		CBI Intentions Inquiry	Gross fixed investment		CBI Intentions Inquiry	
	£ million, 1970 prices, seasonally adjusted	£ million, 1970 prices, seasonally adjusted	*Percentage change on year earlier*	Balance[4]	£ million, 1970 prices, seasonally adjusted	*Percentage change on year earlier*	Balance[4]	£ million, 1970 prices, seasonally adjusted
1967	1,737·7	1,318·6	*+ 1*	..	319·6	*−12*	..	527·9
1968	1,851·2	1,406·1	*+ 7*	..	335·9	*+ 5*	..	549·6
1969	1,977·5	1,471·5	*+ 5*	..	390·1	*+16*	..	605·9
1970	2,129·8	1,623·9	*+10*	..	391·2	*—*	..	565·2
1971	1,988·0	1,520·2	*− 6*	..	353·0	*−10*	..	405·2
1972	1,720·8	1,310·4	*−14*	..	287·1	*−19*	..	400·5
1973	1,730·3	1,333·0	*+ 2*	..	266·7	*− 7*	..	514·9
1974	1,964·4	1,529·2	*+15*	..	295·0	*+11*	..	433·0
1975	1,694·9	1,336·7	*−13*	..	252·8	*−14*	..	276·9
1976	1,632·8	1,297·7	*− 3*	..	213·8	*−15*	..	329·5
1977	1,763·8	1,385·4	*+ 7*	..	228·8	*+ 7*	..	394·4
1973 *1*	435·0	337·3	*− 4*	30	64·6	*−15*	4	121·7
2	416·7	321·3	*—*	35	64·1	*−12*	11	124·5
3	449·6	347·1	*+10*	39	69·3	*− 4*	18	130·0
4	429·0	327·3	*+ 2*	38	68·7	*+ 5*	16	138·8
1974 *1*	496·5	384·6	*+14*	− 3	76·9	*+19*	−15	109·8
2	488·2	379·3	*+18*	2	73·3	*+14*	−10	108·0
3	486·7	379·7	*+ 9*	− 6	71·1	*+ 3*	−22	109·8
4	493·0	385·6	*+18*	−33	73·7	*+ 7*	−39	105·5
1975 *1*	455·5	358·0	*− 7*	−41	68·7	*−11*	−47	86·4
2	432·5	341·4	*−10*	−27	65·8	*−10*	−42	65·8
3	409·2	322·1	*−15*	−24	62·0	*−13*	−39	73·1
4	397·7	315·2	*−18*	−15	56·3	*−24*	−31	51·6
1976 *1*	396·5	314·9	*−12*	10	54·3	*−21*	−12	72·5
2	400·0	316·4	*− 7*	15	52·2	*−21*	− 9	81·4
3	414·3	329·9	*+ 2*	25	53·1	*−14*	− 3	79·6
4	422·0	336·5	*+ 7*	26	54·2	*− 4*	1	96·0
1977 *1*	418·5	331·0	*+ 5*	29	52·1	*− 4*	4	92·0
2	432·9	336·8	*+ 6*	31	55·9	*+ 7*	—	110·9
3	455·9	360·5	*+ 9*	23	58·7	*+11*†	− 4	97·9
4	456·5	357·1	*+ 6*	21	62·1	*+15*	− 3	93·6
1978 *1*	445·5	354·0	*+ 7*	21	56·8	*+ 9*	− 4	121·4
2				18			− 7	
3				13			−15	
4								

[1] New orders from 3rd quarter 1974 include orders received by firms, mostly small, added to the statistical register in that period.
[2] From 2nd quarter 1976 figures are not precisely comparable with those for earlier periods because of revisions to estimation methods and minor changes in type of work classification.
[3] Updated seasonal factors have produced some revisions to the back series; at the same time the opportunity has been taken to incorporate revisions to the data arising from late or revised reporting.
[4] Percentage of firms expecting to authorise more in next 12 months *less* percentage expecting to authorise less.
[5] Provisional.

Department of Industry inquiry into investment intentions[1]: manufacturing industry

	Percentage change over previous year, in volume terms			
	Gross fixed investment			
	First forecast	Second forecast	Third forecast	Actual
1968	probably some increase	about +5	less than +5	+ 6·5
1969	between +10 and +15	+10 to +15, perhaps top end	of the order of +10	+ 6·8
1970	about +10	about +10	about +2 or +3	+ 7·7
1971	no large change	about −2	about −6 to −8	− 6·7
1972	little change, perhaps a rise	about −3	−7	−13·4
1973	+2 to +5	+2 to +5	+6	+ 0·6
1974	strong increase about +15	some +12 to +14	about +5	+13·5
1975	less than +5	−7 to −10	about −11 or −12	−13·7
1976	of the order of −5	−5 to −8	−4 to −5	− 3·7
1977	between +15 and +20	+10 to +15	+7	+ 7·9
1978	between +12 and +17	+10 to +13		

[1] For each year the first inquiry is held in the preceding summer, the second at the end of the previous year and the third in the summer of the year concerned. (In addition the inquiry at the end of the year seeks preliminary information in respect of the second year ahead and another survey in the spring of each year updates the intentions for both years covered by this inquiry; these two inquiries are not included in the table.)

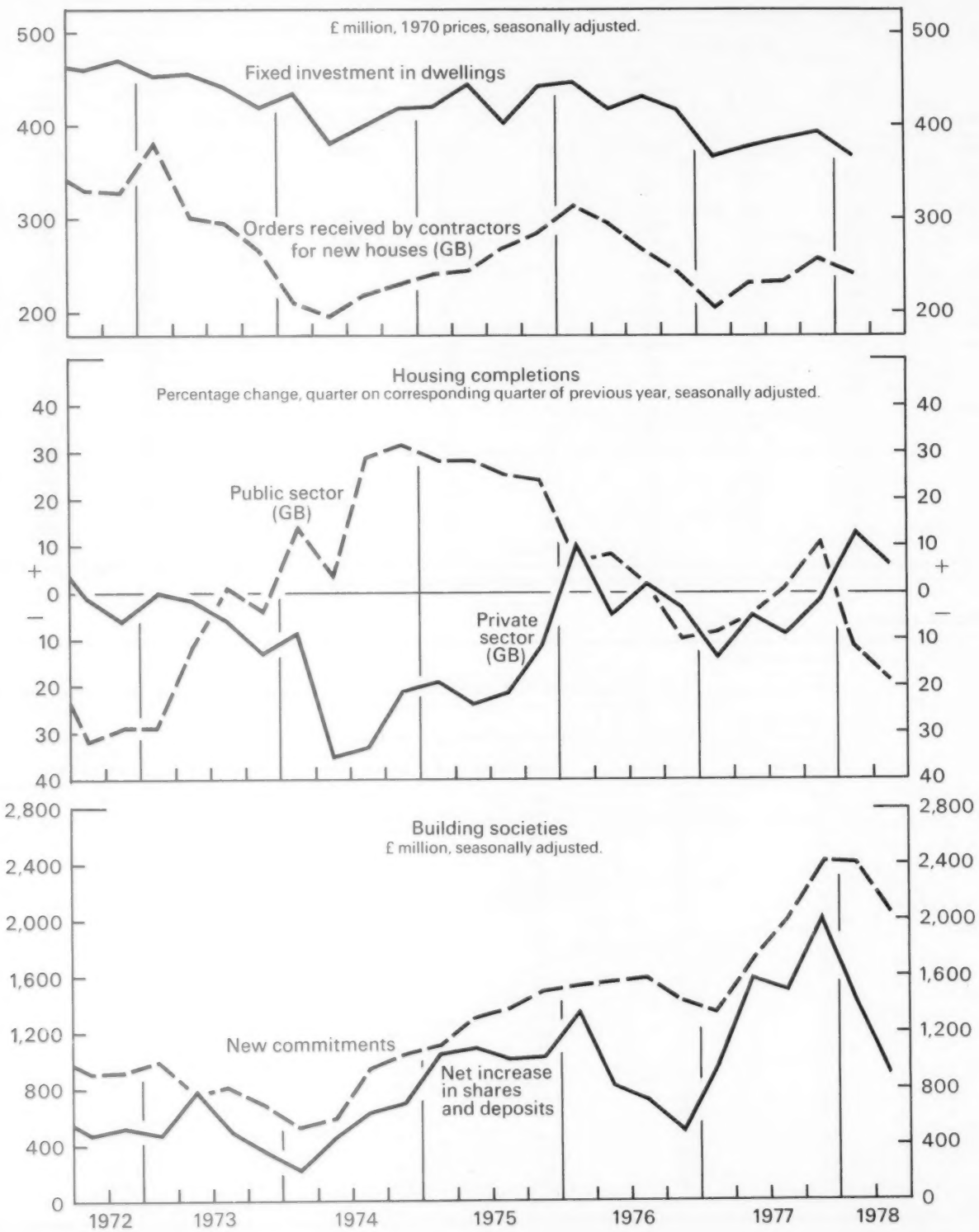


[1]The results of the CBI intentions inquiry have been moved forward one year for direct comparison with the percentage changes in fixed investment

Indicators of fixed investment in dwellings

	Seasonally adjusted								Unadjusted
	£ million, 1970 prices		Thousands				£ million		1970=100
			Housing starts (GB) §		Housing completions (GB) §		Building Societies Association		
	Fixed investment in dwellings	Orders received by contractors for new houses (GB) [1,2,3]	Private sector	Public sector	Private sector	Public sector	New commitments for mortgages	Net increase in shares and deposits	Average price of new dwellings: mortgages approved [4]
1967	1,784	1,665·9	233·6	213·9	200·4	203·9	1,649	1,099	83·8
1968	1,868	1,435·7	200·1	194·3	222·0	191·7	1,480	767	89·6
1969	1,785	1,165·9	166·8	176·6	181·7	185·1	1,580	895	94·2
1970	1,643	1,171·6	165·1	153·8	170·3	180·1	2,188	1,490	100·0
1971	1,749	1,190·8	207·4	136·9	191·6	158·9	3,013	2,034	115·3
1972	1,838	1,351·1	228·0	123·0	196·5	122·8	3,802	2,193	151·5
1973	1,772	1,247·9	215·7	112·8	186·6	107·5	3,254	2,162	206·4
1974	1,639	860·3	105·9	146·1	140·9	128·6	3,115	1,993	218·9
1975	1,713	1,040·6	149·1	173·8	150·8	162·3	5,302	4,172	239·5 [5]
1976	1,712	1,114·6	154·7	170·9	152·2	163·0	6,106	3,405	259·5
1977	1,518	929·0	134·8	132·1	140·3	162·5	7,524†	6,099†	285·1
1973 *1*	454	382·4	62·6	29·8	48·8	25·8	991	476	196·0
2	456	303·2	54·9	27·8	49·0	29·5	759	805	205·4
3	441	297·7	52·8	27·2	46·1	26·2	816	511	211·6
4	421	264·5	45·4	28·0	42·7	26·0	688	370	217·0
1974 *1*	436	211·0	33·8	34·1	44·3	29·5	533	218	216·8
2	383	199·7	25·8	39·7	31·9	30·8	598	456	215·4
3	401	219·3	22·5	36·5	30·9	33·9	931	634	221·0
4	419	230·4	23·8	35·8	33·8	34·4	1,053	685	221·8
1975 *1*	420	240·2	33·1	41·4	35·8	37·8	1,119	1,054	228·1
2	445	243·6	37·4	37·8	39·6	39·3	1,311	1,085	239·4
3	406	270·2	38·0	43·9	37·6	42·5	1,373	1,012	244·5
4	442	286·7	40·6	50·7	37·8	42·7	1,499	1,021	246·1
1976 *1*	448	312·5	42·0	49·8	39·4	40·6	1,537	1,341	249·8
2	418	295·1	42·0	44·3	37·8	42·4	1,552	824	258·4
3	430	264·7	39·3	44·4	38·3	41·5	1,581	727	264·1
4	416	242·1	31·4	32·4	36·7	38·5	1,419	513	267·0
1977 *1*	366	207·8 [5]	29·9	30·3	33·7	37·5	1,337†	963†	270·0
2	376	230·9	34·7	32·7	35·8	40·3	1,743	1,599	279·2
3	385	234·0	35·3	34·6	34·8	41·8	2,018	1,487	288·6
4	396	256·3	34·9	34·5	36·0	42·9	2,426	2,050	298·1
1978 *1*	365	239·7†	35·0	26·3	38·0	32·9	2,414	1,411	312·5
2		254·8 [6]	39·6	29·8	37·8	32·8	2,062	910	330·4
1977 *A*	..	71·8	12·3	10·0	12·4	13·5	500†	505†	275·6
M	..	74·5	11·2	11·1	11·7	13·0	642	605	278·1
J	..	84·6	11·2	11·6	11·7	13·8	601	489	283·6
J	..	69·2	12·2	11·6	12·6	12·8	611	436	286·3
A	..	84·0	9·8	10·9	10·4	14·4	690	470	289·4
S	..	80·8	13·3	12·1	11·8	14·6	717	581	290·1
O	..	76·6	12·3	12·4	12·3	14·9	775	676	294·7
N	..	87·6	10·8	11·1	11·3	13·7	809	709	298·1
D	..	92·1	11·8	11·0	12·4	14·3	842	665	302·0
1978 *J*	..	79·0†	11·5	10·6	13·0	11·4	817	524	307·7
F	..	79·3	11·2	7·2	12·1	10·6	827	440	309·3
M	..	81·4	12·3	8·5	12·9	10·9	770	447	319·6
A	..	78·0	13·5	10·0	12·4	10·8	724	297	325·2
M	..	88·6 [6]	12·2†	9·9†	12·5†	11·3	690	299	327·9
J	..	88·2 [6]	13·9	9·9	12·9	10·7	648	314	338·9
J							639	344	
A									
S									

[1] New orders from 3rd quarter 1974 include orders received from firms, mostly small, added to the statistical register in that period.
[2] From April 1976 figures are not precisely comparable with those for earlier periods because of revisions to estimation methods and minor changes in type of work classification.
[3] Updated seasonal factors have produced some revisions to the back series; at the same time the opportunity has been taken to incorporate revisions to the data arising from late or revised reporting.
[4] Mortgages with building societies by private owners. The index covers only dwellings on which building societies have approved mortgages during the period. The cost of land is included.
[5] From 1975 figures are based on a new monthly return covering 90 per cent of building society mortgages. [6] Provisional


£ million, 1970 prices, seasonally adjusted.
Fixed investment in dwellings
Orders received by contractors for new houses (GB)
500
400
300
200
Housing completions
Percentage change, quarter on corresponding quarter of previous year, seasonally adjusted.
Public sector (GB)
Private sector (GB)
+
0
—
40
30
20
10
Building societies
£ million, seasonally adjusted.
New commitments
Net increase in shares and deposits
2,800
2,400
2,000
1,600
1,200
800
400
0
1972
1973
1974
1975
1976
1977
1978

Stock changes

Seasonally adjusted

£ million, 1970 prices

	All industries	Manufacturing[1]				Distribution			Other industries
		Total	Materials and fuels	Work in progress	Finished goods	Total	Retail	Wholesale	
Book values end-December									
1976	18,401	10,529	3,543	4,082	2,903	3,759	1,929	1,830	4,113
1972 *3*	24	− 21	3	− 7	− 33	− 1	− 15	14	46
4	8	19	22	8	− 5	− 4	− 19	15	− 7
1973 *1*	462	199	89	110	0	131	92	39	132
2	424	166	94	75	− 3	216	209	7	42
3	262	111	43	82	− 14	70	40	30	81
4	217	121	77	57	− 13	64	38	26	32
1974 *1*	−149	− 71	64	− 24	−111	1	− 20	21	− 79
2	341	211	68	22	121	73	25	48	57
3	371	377	135	73	169	− 32	− 37	5	26
4	− 2	117	20	15	82	− 70	− 77	7	− 49
1975 *1*	−197	− 31	−136	17	88	− 66	− 44	− 22	−100
2	−241	− 74	− 51	− 22	− 1	−112	− 61	− 51	− 55
3	−224	−209	−141	− 61	− 7	− 10	16	− 26	− 5
4	−180	−115	− 63	− 52	0	12	24	− 12	− 77
1976 *1*	− 1	—	− 25	12	13	59	33	26	− 60
2	− 12	− 66	− 28	− 34	− 4	− 65	− 45	− 20	119
3	5	− 2	7	− 16	7	30	16	14	− 23
4	105	73	− 15	48	40	8	5	3	24
1977 *1*	234	125	55	44	26	153	102	51	− 44
2	229	164	39	− 5	130	34	− 5	39	31
3	− 30	− 31	− 26	− 32	27	− 39	− 44	5	40
4	11	− 25	− 36	60	− 49	− 23	− 36	13	59
1978 *1*	249	125	43	37	45	114	61	53	10

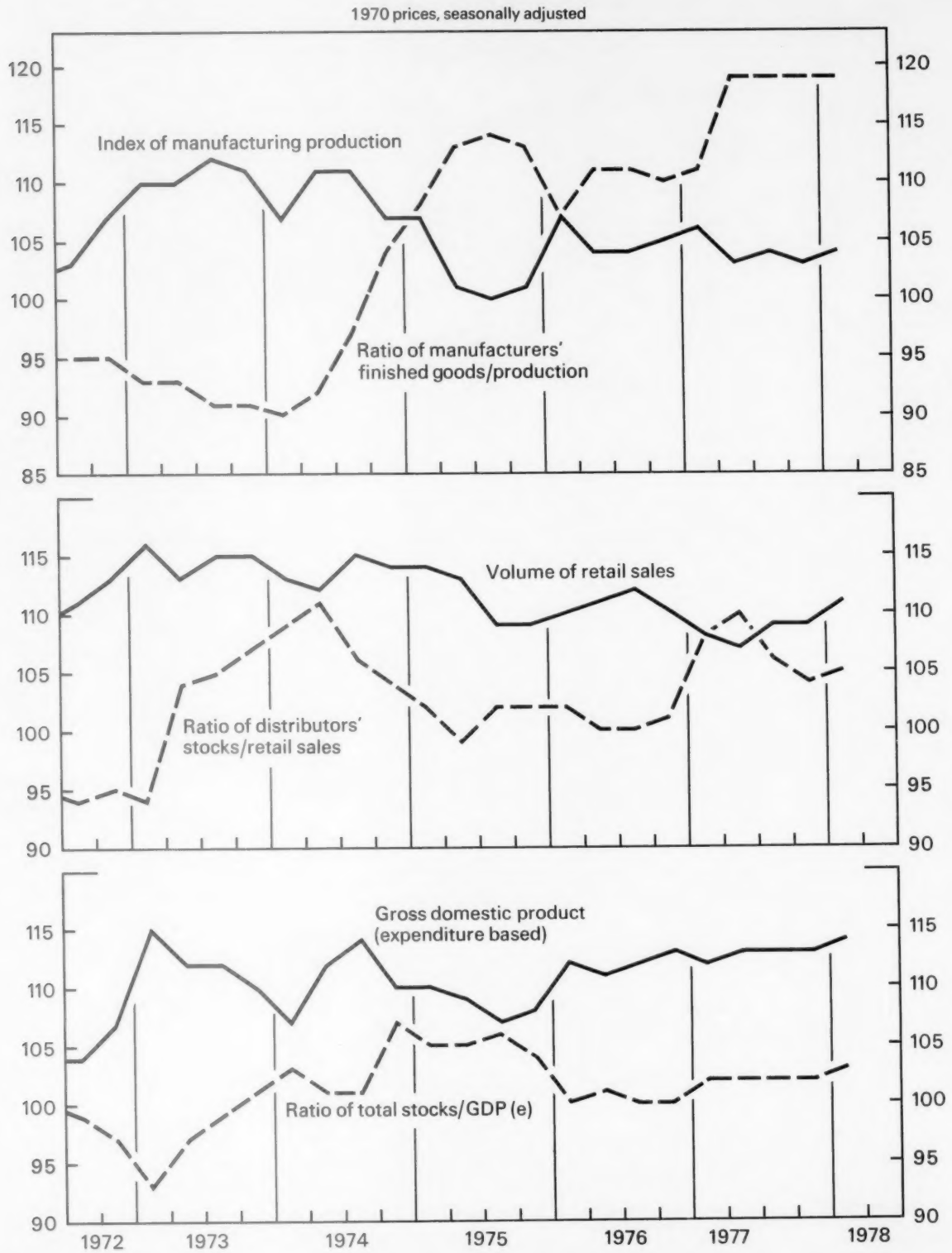
[1] Differences between totals and the sum of constituent parts of manufacturing are due to rounding.

Stock ratios

Seasonally adjusted

1970 prices: stocks level, end-Dec. 1969=100; GDP (e), industrial production and retail sales, 4th quarter 1969=100

	Total stocks to gross domestic product (expenditure based)	Manufacturers' stocks to manufacturing production				Distributors' stocks to retail sales
		Total stocks	Materials and fuel	Work in progress	Finished goods	
1972 *1*	100	104	102	104	108	97
2	100	93	90	94	96	95
3	99	93	90	94	95	94
4	97	94	92	95	95	95
1973 *1*	93	93	91	95	93	94
2	97	95	94	97	93	104
3	99	94	93	97	91	105
4	101	96	96	99	91	107
1974 *1*	103	99	102	103	90	109
2	101	98	100	100	92	111
3	101	101	103	101	97	106
4	107	105	107	105	104	104
1975 *1*	105	106	104	106	108	102
2	105	110	108	111	113	99
3	106	109	105	110	114	102
4	104	107	102	108	113	102
1976 *1*	100	102	96	103	107	102
2	101	104	98	105	111	100
3	100	104	98	104	111	100
4	100	104	97	105	110	101
1977 *1*	102	104	98	105	111	108
2	102	108	101	107	119	110
3	102	107	100	106	119	106
4	102	108	100	108	119	104
1978 *1*	103	107	100	107	119	105


1970 prices, seasonally adjusted
Index of manufacturing production
Ratio of manufacturers' finished goods/production
Volume of retail sales
Ratio of distributors' stocks/retail sales
Gross domestic product (expenditure based)
Ratio of total stocks/GDP (e)
120
115
110
105
100
95
90
85
1972
1973
1974
1975
1976
1977
1978

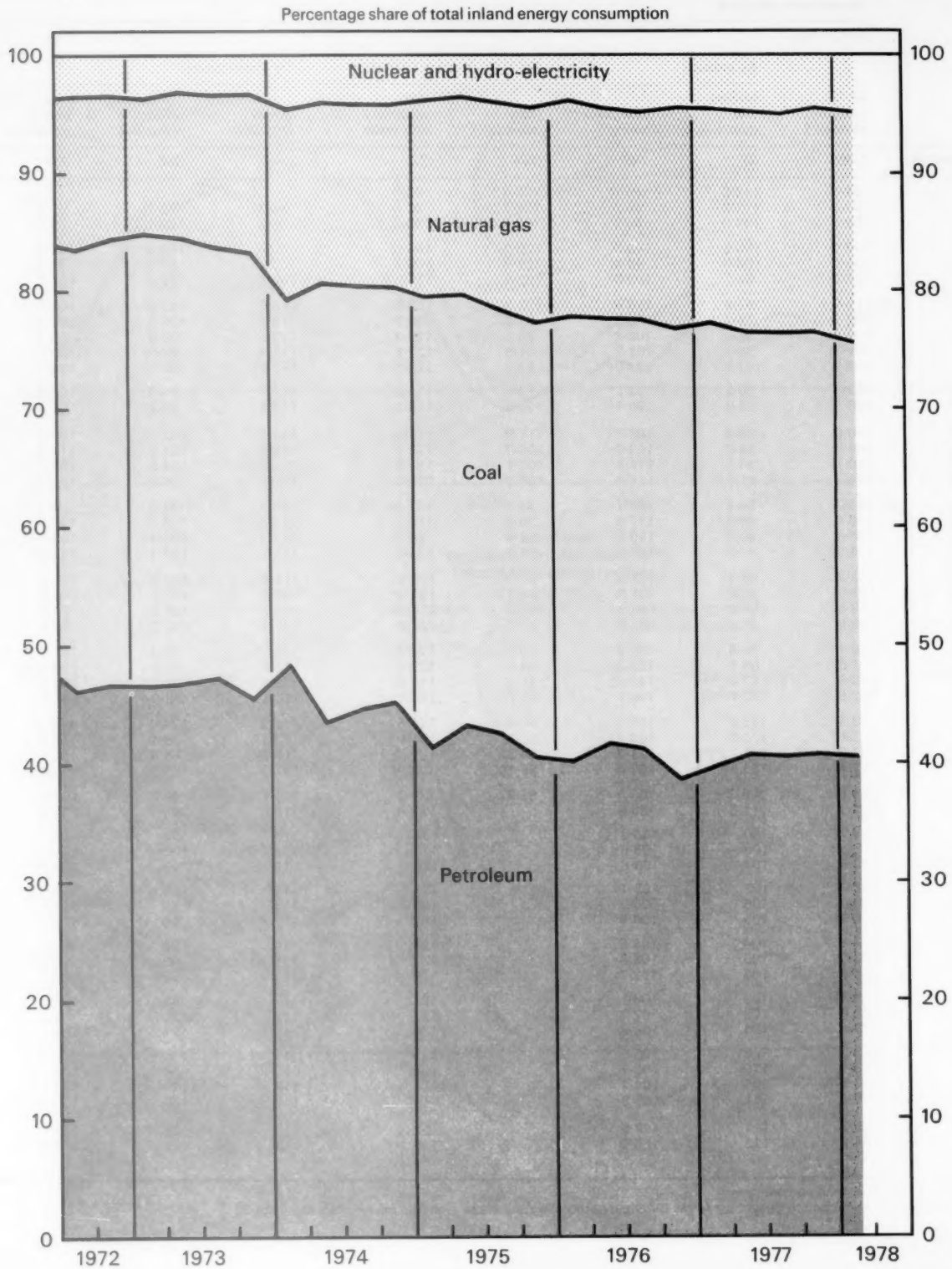
24

Inland energy consumption

Annual rates, seasonally adjusted and temperature corrected

	Primary fuel input[1]						Public supply	
	Million tonnes of coal or coal equivalent						Thousand million kilowatt hours	Thousand million therms
	Total	Coal[2]	Petroleum[3]	Natural gas[4]	Nuclear electricity[5]	Hydro electricity[5]	Electricity available(GB)[6]	Gas available(GB)[7]
1967	303·2	166·3	123·1	2·1	9·0	2·7	177·8	4·37
1968	312·9	166·7	129·2	4·8	10·2	2·0	193·6	4·88
1969	323·0	162·8	138·4	9·4	10·7	1·7	200·5	5·40
1970	336·3	156·8	149·8	17·8	9·5	2·4	211·6	6·30
1971	332·9	140·0	152·4	28·8	9·9	1·8	215·9	8·25
1972	337·4	121·8	162·2	41·0	10·6	1·8	224·1	10·82
1973	354·2	133·2	164·5	44·4	10·1	2·0	241·0	12·04
1974	337·9	117·7	153·1	52·9	12·1	2·1	235·5	13·53
1975	326·9	120·6	137·1	56·3	10·9	2·0	234·2	13·90
1976	331·5	123·0	134·2	59·5	12·9	1·9	236·7	14·41
1977	338·2	122·4	136·8	62·7	14·3	2·0	240·2	15·42†
1972 *1*	316·9	104·8	162·7	36·0	11·6	1·8	213·4	9·98
2	337·9	121·1	163·7	40·3	10·5	2·3	224·4	10·70
3	341·5	128·0	157·2	44·4	9·9	2·0	226·3	11·18
4	353·6	133·3	165·2	43·2	10·8	1·1	232·2	11·42
1973 *1*	350·1	134·5	162·8	40·0	10·9	1·9	243·2	11·51
2	355·4	134·6	165·8	43·7	9·3	2·0	241·3	11·69
3	358·7	131·3	169·2	45·8	10·2	2·2	241·3	12·19
4	352·5	132·4	160·3	48·1	9·9	1·8	238·3	12·79
1974 *1*	311·5	96·3	150·8	50·1	11·5	2·8	216·3	13·20
2	342·4	126·7	149·4	52·6	12·4	1·3	237·1	13·49
3	350·9	125·9	155·8	54·9	12·3	2·0	244·2	13·66
4	346·9	122·0	156·3	54·1	12·1	2·4	244·3	13·78
1975 *1*	331·1	127·2	136·8	54·2	10·8	2·1	236·2	13·73
2	331·4	121·2	143·0	55·2	10·4	1·6	237·3	13·71
3	326·4	116·9	139·2	57·4	10·8	2·1	234·7	13·97
4	318·9	117·2	129·2	58·5	12·0	2·0	228·5	14·17
1976 *1*	332·5	125·5	133·8	60·4	10·9	1·9	230·9	14·27
2	334·6	120·8	139·5	59·2	12·5	2·6	240·4	14·36
3	330·9	120·5	136·7	57·6	14·6	1·5	244·3	14·46
4	328·0	125·2	126·8	61·0	13·4	1·6	231·4	14·56
1977 *1*	336·9	126·3	134·0	61·1	13·9	1·6	237·9	14·95
2	337·7	121·1	137·7	62·0	14·5	2·4	242·9	15·32
3	340·5	121·6	138·1	63·4	15·7	1·7	248·3	15·58†
4	337·5	120·4	137·3	64·3	13·1	2·4	231·9	15·81
1978 *1*	331·8†	116·7†	134·4†	64·3	14·6	1·8	237·3	15·71
2								
	Percentage change, quarter on corresponding quarter of previous year							
1976 *1*	*+ 0·4*	*− 1·3*	*− 2·2*	*+11·4*	*+ 0·9*	*− 9·5*	*− 2·2*	*+ 3·9*
2	*+ 1·0*	*− 0·3*	*− 2·5*	*+ 7·2*	*+20·2*	*+62·5*	*+ 1·3*	*+ 4·7*
3	*+ 1·4*	*+ 3·1*	*− 1·8*	*+ 0·3*	*+35·2*	*−28·6*	*+ 4·1*	*+ 3·5*
4	*+ 2·9*	*+ 6·8*	*− 1·9*	*+ 4·3*	*+11·7*	*−20·0*	*+ 1·3*	*+ 2·8*
1977 *1*	*+ 1·3*	*+ 0·6*	*—*	*+ 1·2*	*+27·5*	*−15·8*	*+ 3·0*	*+ 4·8*
2	*+ 0·9*	*+ 0·2*	*− 1·3*	*+ 4·7*	*+16·0*	*− 7·7*	*+ 1·0*	*+ 6·7*
3	*+ 2·9*	*+ 0·9*	*+ 1·0*	*+10·1*	*+ 7·5*	*+13·3*	*+ 1·6*	*+ 7·7†*
4	*+ 2·9*	*− 3·8*	*+ 8·3*	*+ 5·4*	*− 2·2*	*+50·0*	*+ 0·2*	*+ 8·6*
1978 *1*	*− 1·5†*	*− 7·6†*	*+ 0·2*	*+ 5·2*	*+ 5·0*	*+12·5*	*− 0·2*	*+ 5·1*

[1] Converted to metric tonnes. Temperature correction has been introduced for natural gas. Details are given in *Energy Trends*, May 1978.
[2] Consumption by fuel producers *plus* colliery disposals to final users *plus* net foreign trade and stock change in other solid fuels.
[3] Refinery throughput of crude oil *plus* net foreign trade and stock change in petroleum products *less* deliveries of non-energy products.
[4] Excluding gas flared or reinjected.
[5] Nuclear and hydro electricity are not temperature corrected.
[6] The inclusion of Northern Ireland would add about 2% to the total.
[7] The inclusion of Northern Ireland would add about 0·3% to the total.


Percentage share of total inland energy consumption
Nuclear and hydro-electricity
Natural gas
Coal
Petroleum
100
90
80
70
60
50
40
30
20
10
0
1972
1973
1974
1975
1976
1977
1978

Index of industrial production

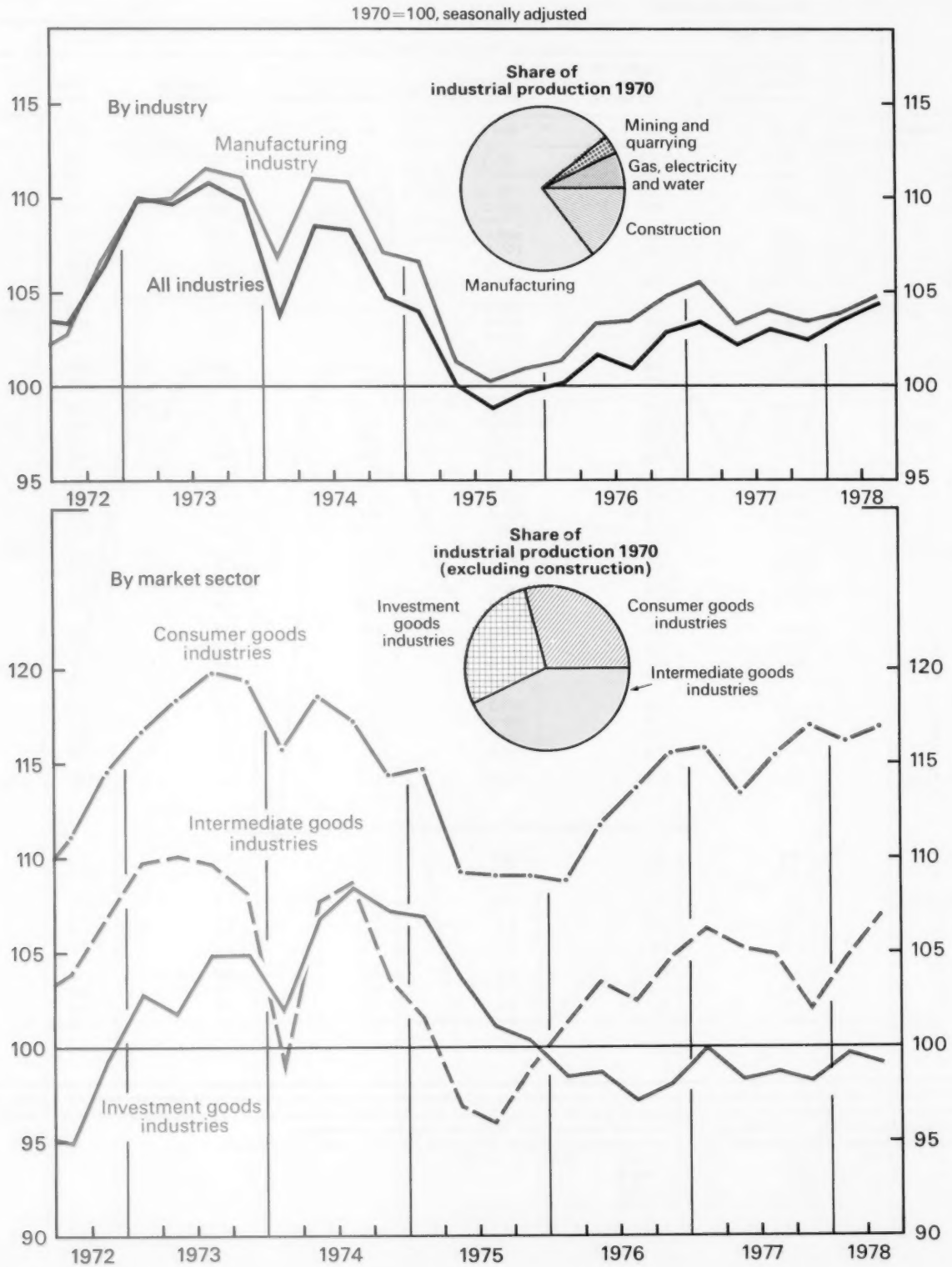
Seasonally adjusted

1970=100

		By industry				By market sector[1]		
	All industries covered §	Mining and quarrying	Manufacturing §	Construction[2]	Gas, electricity and water	Consumer goods industries	Investment goods industries	Intermediate goods industries
1970 weights	*1,000*	*37*	*745*	*146*	*72*	*249*	*238*	*363*
1967	91·7	114·5	89·8	100·4	86·0	..	..	..
1968	97·2	111·2	96·0	102·7	91·6	95·4	94·7	97·8
1969	99·9	104·0	99·6	102·0	96·2	98·3	100·1	99·9
1970	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1971	100·1	100·0	99·4	101·8	103·8	102·5	97·9	99·2
1972	102·3	84·1	102·0	103·5	111·3	109·8	95·4	101·1
1973	110·0	92·6	110 5	107·9	118·1	118·7	103·5	109·4
1974	106·3	79·2	108·9	93·8	118·5	116·5	106·0	104 6
1975	100·6	85·9	102·2	86·1	120·3	110·6	102·9	98·2
1976	101·4†	88·7	103·2	84·5	123·1	112·4	98·0†	102·9
1977	102·7	103·6	104·0†	83·2	128·1	115·4†	98·7	104·5
1972 *3*	103·3	96·2	102·8	102·6	114·6	111·1	94·9	103·9
4	106·3	96·9	106·7	102·3	114·8	114·6	99·3	106·8
1973 *1*	110·0	98·4	109·7	111·9	115·6	116·7	102·7	109·6
2	109·7	95·8	110·0	107·2	118·6	118·6	101·6	110·0
3	110·7	94·1	111·5	107·1	117·7	119·9	104·9	109·7
4	109·7	81·9	111·0	105·3	120·2	119·4	104·9	108·2
1974 *1*	103·7	54·3	106·7	99·1	107·4	115·7	101·8	98·7
2	108·4	86·1	111·0	96·3	118·1	118·6	106·7	107·6
3	108·4	89·2	110·8	93·4	124·0	117·2	108·4	103·7
4	104·5	87·3	107·0	86·5	124·3	114·3	107·1	103·5
1975 *1*	103·9	86·4	106·5	87·1	120·0	114·8	106·8	101·5
2	100·0	85·6	101·3	86·3	121·4	109·2	103·6	96 8
3	98·8	85·0	100·3	85·4	117·7	109·2	101·0	95·8
4	99·6	86·6	100·9	85·7	122·0	109·0	100·2	98·6
1976 *1*	100·1	86·6	101·2	86·0	124·2	108·7	98·4	101·1
2	101·5	88·7	103·3	84·6	123·5	111·8	98·5	103·4
3	100·9	87·4	103·5†	81·9	119·6	113·6	97·2†	102 4
4	102·9	92·1	104·7	85·7	125·1	115·6	98·0	104·6
1977 *1*	103·4†	102·4	105·5	80·8	127·5	115·9	100·0	106·1
2	102·1	104·0	103·2	81·7	131·1	113·4	98·1	105·2
3	103·0	104·7	104·0	84·3	128·8	115·5†	98·6	104·9†
4	102·4	103·5†	103·4	86·1†	124·9†	117·0	98·0	101·9
1978 *1*	103·5	108·3	103·8	85·7	133·2	116·1	99·6	104·6
2	104·3	111·6	104·8		133·6	116·8	99·0	106·9
1977 *J*	103·5†	100	105·3†	..	132	116	99	107
F	103·3	103	105·6	..	126	116	100†	106
M	103·3	104	105·6	..	125	116	101	105
A	102·4	102	103·7	..	131	115†	99	105
M	103·4	105	105·0	..	130	114	99	107†
J	100·4	105	100·8	..	132	111	96	103
J	103·1	104	104·6	..	125	116	99	105
A	103·0	105	103·8	..	132	115	99	105
S	102·8	106	103·7	..	129	115	98	105
O	102·1	103	103·1	..	124	117	98	101
N	102·0	103	102·7	..	127	116	98	102
D	103·1	104	104·4	..	124	118	98	103
1978 *J*	103·2	108†	103·5	..	133	116	100	104
F	103·7	110	103·7	..	137	116	99	106
M	103·5	107	104·4	..	129	117	100	104
A	105·4	111	105·8	..	138	117	100	109
M	103·3	111	103·6	..	132	115	98	106
J	104·2	112	105·0	..	130	118	99	106

[1] All industries other than construction.

[2] For an index of construction output for Great Britain, incorporating the latest available information see page 30.


1970=100, seasonally adjusted
By industry
Manufacturing industry
All industries
Share of industrial production 1970
Mining and quarrying
Gas, electricity and water
Construction
Manufacturing
115
110
105
100
95
1972
1973
1974
1975
1976
1977
1978
By market sector
Consumer goods industries
Intermediate goods industries
Investment goods industries
Share of industrial production 1970 (excluding construction)
Investment goods industries
Consumer goods industries
Intermediate goods industries
120
115
110
105
100
95
90

Index numbers of output

Seasonally adjusted

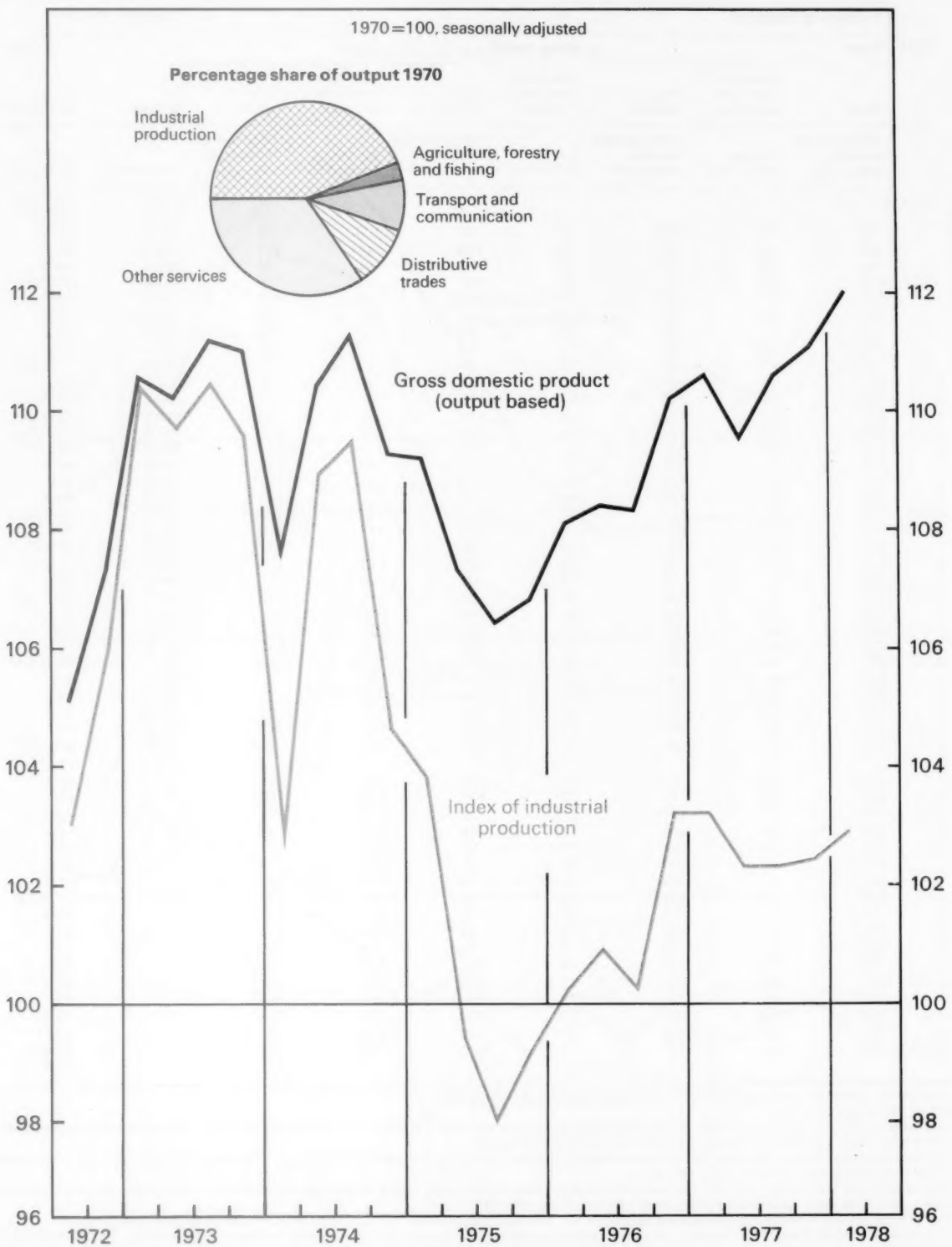
1970=100

	Gross domestic product (based on output data)[1,2] §	Agriculture, forestry and fishing	Industrial production[1] §	Transport and communication	Distributive trades	Other services
1970 weights	*1,000*	*30*	*439*	*84*	*104*	*343*
1967	92·5	94	91·7	89	94	95
1968	96·4	94	97·2	92	97	96
1969	98·3	95	99·9	96	98	97
1970	100·0	100	100·0	100	100	100
1971	101·5	106	99·9	103	102	103
1972	104·4	108	101·8	108	107	106
1973	110·7	111	110·0	116	114	109
1974	109·6	116	106·4	116	112	111
1975	107·4	111	100·1	117	110	114
1976	108·7	101	101·1	118	110	116
1977	110·4	106	102·6	124	109	118
1972 *3*	105·1	108	102·9	109	108	106
4	107·2	108	105·9	111	111	107
1973 *1*	110·6	109	110·4	115	115	109
2	110·2	109	109·6	116	112	109
3	111·1	113	110·5	117	114	110
4	111·0	114	109·5	118	115	110
1974 *1*	107·5	115	102·6	115	112	110
2	110·4	115	108·9	117	110	111
3	111·3	116	109·5	117	114	111
4	109·3	117	104·7	116	113	112
1975 *1*	109·2	115	103·8	117	113	113
2	107·3	112	99·6	118	110	113
3	106·4	109	98·0	117	107	114
4	106·8	106	99·2	116	108	114
1976 *1*	108·1	104	100·2	117	110	116
2	108·4	104	100·8	117	110	116
3	108·3	100	100·2	118	111	116
4	110·2	97	103·2	120	110	118
1977 *1*	110·6	98	103·2	123	109	118
2	109·5	102	102·3	123	107	117
3	110·6	110	102·3	123	110	118
4	111·1	114	102·4	125	110	119
1978 *1*	112·0	118	102·9	128	112	119
2						
	Percentage change, quarter on corresponding quarter of previous year					
1975 *3*	*−4·4*	*− 5·9*	*−10·5*	*—*	*−5·6*	*+2·6*
4	*−2·3*	*− 9·5*	*− 5·3*	*—*	*−4·8*	*+2·1*
1976 *1*	*−1·1*	*− 9·2*	*− 3·5*	*− 0·2*	*−2·5*	*+2·7*
2	*+1·0*	*− 7·7*	*+ 1·2*	*− 0·6*	*−0·8*	*+2·4*
3	*+1·8*	*− 7·8*	*+ 2·2*	*+ 0·9*	*+3·5*	*+1·8*
4	*+3·2*	*− 8·5*	*+ 4·0*	*+ 3·8*	*+2·7*	*+3·1*
1977 *1*	*+2·3*	*− 5·8*	*+ 3·0*	*+ 5·4*	*−0·8*	*+2·2*
2	*+1·0*	*− 1·4*	*+ 1·5*	*+ 5·1*	*−2·6*	*+0·8*
3	*+2·1*	*+ 9·2*	*+ 2·1*	*+ 4·1*	*−1·3*	*+2·0*
4	*+0·8*	*+17·5*	*− 0·8*	*+ 4·0*	*−0·7*	*+1·0*
1978 *1*	*+1·3*	*+20·0*	*− 0·3*	*+ 4·3*	*+2·4*	*+0·6*
2						

[1] As from 1970 the figures are adjusted to allow for the use of delivery rather than production indicators to represent output in certain industries within manufacturing. An analysis of industrial production is given on page 26, but will differ from the series shown here because the adjustment included is not available monthly. There may also be differences because page 26 includes the latest information.

[2] Total output other than exploration for, and extraction of, petroleum and natural gas (MLH 104) is as follows:

1976	*1* 108·0	1977	*1* 110·2	1978	*1* 111·5	
	2 108·2		*2* 109·1			
	3 108·2		*3* 110·1			
	4 109·9		*4* 110·6			

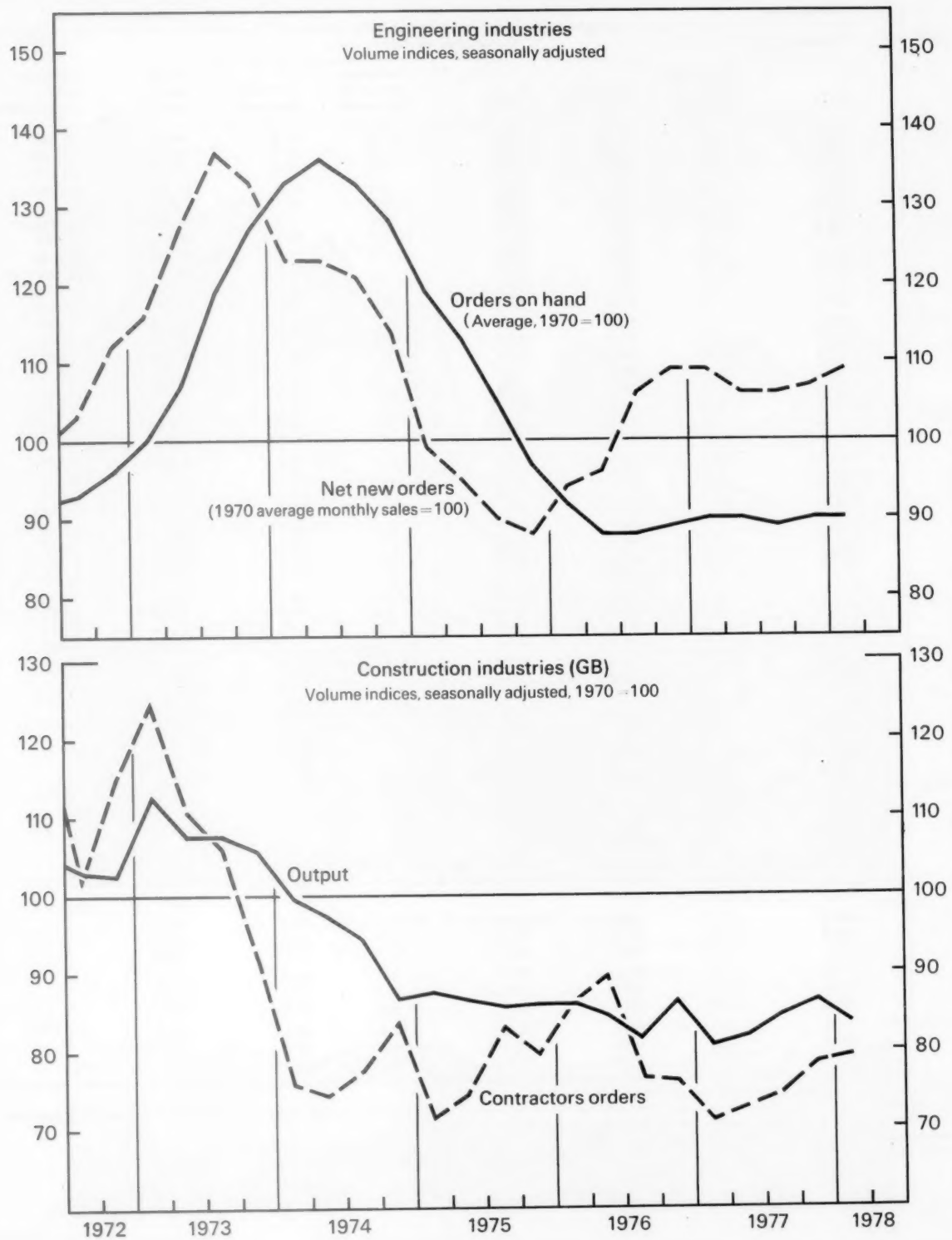

1970=100, seasonally adjusted
Percentage share of output 1970
Industrial production
Agriculture, forestry and fishing
Transport and communication
Distributive trades
Other services
Gross domestic product (output based)
Index of industrial production
112
110
108
106
104
102
100
98
96
1972
1973
1974
1975
1976
1977
1978

Engineering and construction: output and orders

Seasonally adjusted volume index numbers

	Engineering industries[1]							Construction (GB)	
	Total			Home market		Export			
	Sales	Orders on hand end of period	New orders[2]	Orders on hand end of period	New orders[2]	Orders on hand end of period	New orders[2]	Output[3]	Orders received[4,5,6]
	1970 average monthly sales=100	Average 1970=100	1970 average monthly sales=100	Average 1970=100	1970 average monthly sales=100	Average 1970=100	1970 average monthly sales=100	1970=100	1970=100
1967	..	..	..	..	..	..	..	100·3	118·1
1968	..	..	..	..	..	..	..	102·4	108·7
1969	97	101	100	102	99	100	102	101·9	102·6
1970	100	99	100	99	100	99	101	100·0[7]	100·0
1971	99	90	94	92	96	84	90	101·7	106·9
1972	100	96	104	100	107	89	96	103·8	112·9
1973	111	127	129	127	129	128	128	108·5	108·2
1974	115	128	115	122	110	142	128	94·5	77·8
1975	110	97	93	90	89	112	103	86·3	77·0
1976[8]	105	90†	101	77	92	117†	124	84·6	82·2
1977	106	91	107	77	98	121	129	83·3	74·2
1972 *3*	100	93	103	96	107	87	90	102·9	102·0
4	106	96	112	100	115	89	104	102·5	114·9
1973 *1*	108	100	116	104	121	91	104	112·7	124·5
2	111	107	127	111	128	100	125	107·8	110·7
3	112	119	137	121	135	115	143	107·6	106·0
4	114	127	133	127	130	128	139	105·9	91·6
1974 *1*	111	133	123	128	113	143	148	99·8	75·9
2	115	136	123	129	116	151	140	97·2	74·2
3	117	133	111	127	110	148	115	94·2	77·6
4	116	128	104	122	102	142	110	86·9	83·6
1975 *1*	118	120	99	113	96	134	105	87·3	71·1
2	110	113	95	106	91	128	106	86·5	74·4
3	108	105	90	98	86	120	101	85·5	83·0
4	105	97	88	90	84	112	99	85·9	79·7
1976 *1*	104	93†	94	86	89†	108†	110	86·0	86·2
2	106	88	96†	81	91	103	107	84·4	89·7
3[8]	105	88	106	79	95	109	135	81·8	76·6
4	105	90	109	77	95	117	144†	86·1	76·2
1977 *1*	108	90	109	77	101†	120	131	80·7	71·0
2	106	90	106	76†	95	122	133	81·9	72·9
3	106†	90	106	76	97	121	129	84·5	74·4
4	104	91	107	77	100	121	125	86·2	78·5
1978 *1*	110	90	109	77	103	119	126	83·6[8]	80·9
2									77·6[8]†
1977 *J*	111	90†	112	77	104	118†	131	..	75·4
F	108	90	111	78†	103	119	133	..	64·1
M	104	90	104†	77	94	120	129	..	73·4
A	108	90	110	77	98	121	140	..	69·2
M	104	91	107	77	96	123	137†	..	70·7
J	107	90	100	76	91	122	123	..	78·8
J	108	89	105	76	99	120	119	..	64·3
A	105	90	109	76	98	121	140	..	72·5
S	107	90	103	76	94	121	127	..	86·4
O	106	90	107	76	99	121	128	..	68·3
N	101	90	100	77	98	119	107	..	79·1
D	105	91	113	77	102	121	139	..	88·1
1978 *J*	110	90	106	78	105	118	107	..	81·3
F	108	92	119	78	105	122	159	..	83·2
M	113†	90	103	77	100	119	112	..	78·3
A	107	90	104	77	100	118	116	..	73·1†
M	112	91	117	78	110	119	138		79·9[8]
J									79·8[8]

[1] Mechanical, instrument and electrical engineering (SIC Orders VII, VIII and IX).
[2] Net of cancellations.
[3] This index is based on an output series which includes repair and maintenance estimates of unrecorded output by small firms and self-employed workers and output by the direct labour departments of the public sector.
[4] Updated seasonal factors have produced some revisions to the back series; at the same time the opportunity has been taken to incorporate revisions to the data arising from late or revised reporting.
[5] New orders from 3rd quarter 1974 include orders received by firms, mostly small, added to the statistical register in that period. An allowance has been made in the index calculation for this small element of discontinuity.
[6] From April 1976 the index has been adjusted to remove the estimated discontinuity caused by revision to estimation methods.
[7] Output series revised from 1970. Details of the new method of deflation to constant prices are given in *Economic Trends,* No. 297, July 1978.
[8] Provisional.

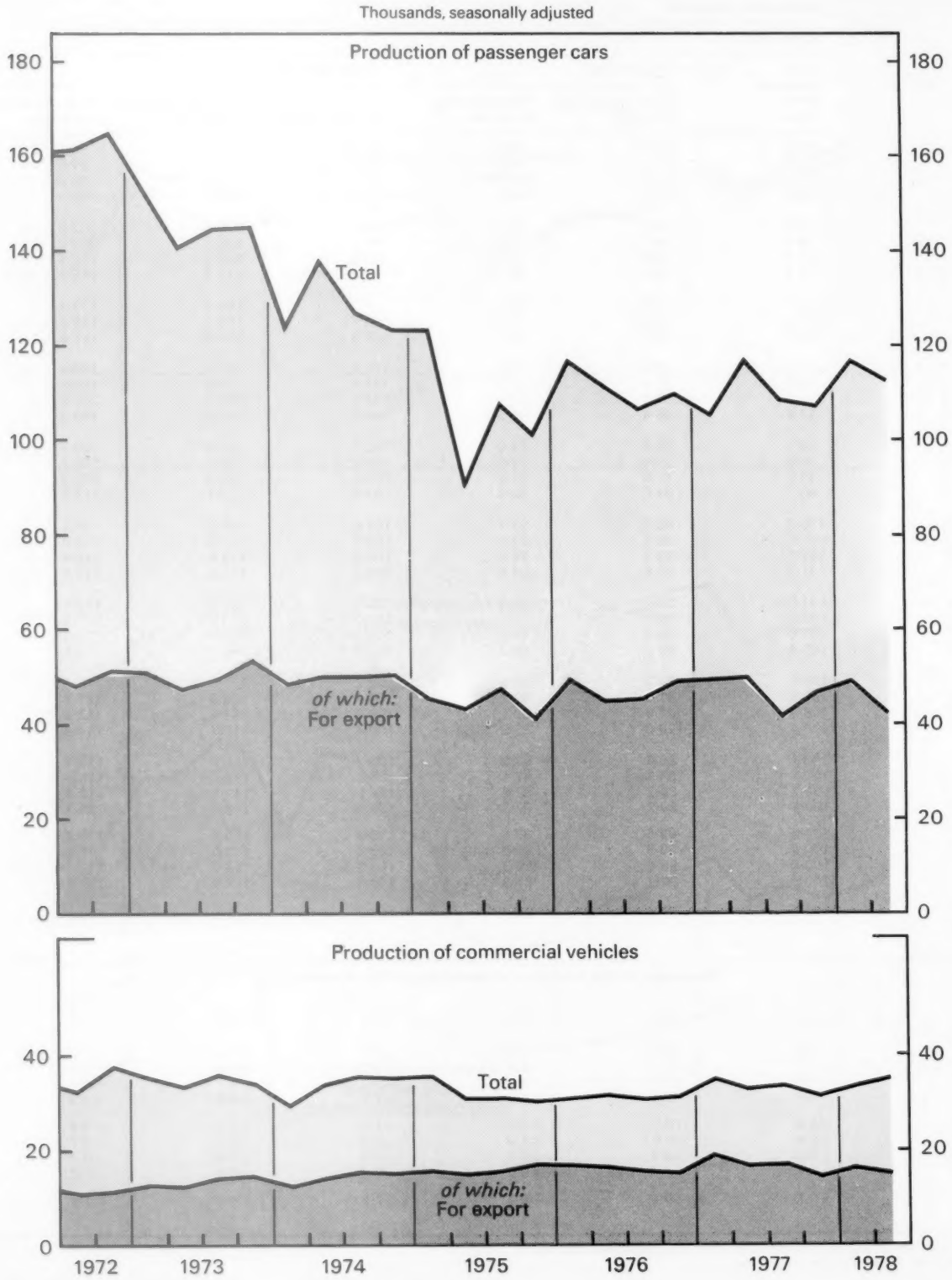

Engineering industries
Volume indices, seasonally adjusted
150
140
130
120
110
100
90
80
Orders on hand
(Average, 1970 = 100)
Net new orders
(1970 average monthly sales = 100)
Construction industries (GB)
Volume indices, seasonally adjusted, 1970 = 100
130
120
110
100
90
80
70
Output
Contractors orders
1972
1973
1974
1975
1976
1977
1978

Motor vehicle production and steel production and consumption

Seasonally adjusted

	Thousands[1]						Thousand tonnes	
	Passenger cars §			Commercial vehicles §				
	Total	*Percentage change on year earlier*	*of which:* For export	Total	*Percentage change on year earlier*	*of which:* For export	Crude steel production[2,3]	Finished steel consumption
1967	129·3	*− 3·2*	47·0	32·1	*−12·2*	11·6	24,279	15,840
1968	151·3	*+17·1*	66·9	34·1	*+ 6·3*	12·5	26,277	16,835
1969	143·1	*− 5·5*	68·7	38·8	*+13·8*	16·1	26,846	17,782
1970	136·7	*− 4·4*	60·2	38·1	*− 1·8*	15·8	27,780[4]	17,637[4]
1971	145·2	*+ 6·2*	59·5	38·0	*− 0·3*	15·7	24,153	16,722
1972	160·1	*+10·3*	51·1	34·0	*−10·6*	11·3	25,293	16,750
1973	145·6	*− 9·1*	50·4	34·7	*+ 2·1*	13·3	26,594	18,445
1974	127·8	*−12·2*	49·7	33·5	*− 3·4*	14·2	22,323	17,548
1975	105·6	*−17·4*	44·3	31·7	*− 5·4*	15·5	19,789[4]	15,446[4]
1976	111·1	*+ 5·2*	47·1	31·0	*− 2·3*	15·8	22,274	15,804
1977	109·7	*− 1·3*	46·9	33·2	*+ 7·0*	16·4	20,411	15,300
1973 *1*	152·2	*− 1·5*	50·8	35·4	*+ 9·9*	12·5	6,671	4,667
2	140·5	*−12·4*	47·7	33·6	*− 1·2*	12·1	6,415	4,368
3	144·6	*−10·3*	49·7	35·9	*+11·0*	14·1	6,954	4,599
4	145·1	*−11·7*	53·5	34·0	*− 9·4*	14·4	6,649	4,811
1974 *1*	123·2	*−19·1*	48·2	29·2	*−17·5*	12·3	5,218	4,357
2	137·9	*− 1·9*	50·0	33·9	*+ 0·9*	14·0	5,784	4,560
3	126·8	*−12·4*	50·0	35·8	*− 0·1*	15·6	5,763	4,252
4	123·5	*−14·9*	50·5	35·3	*+ 3·7*	14·9	5,599	4,379
1975 *1*	123·4	*+ 0·2*	45·5	35·6	*+22·2*	15·8	6,102	4,267
2	90·1	*−34·7*	43·4	30·6	*− 9·9*	14·7	4,661	3,695
3	108·0	*−14·8*	47·5	30·6	*−14·7*	15·2	4,231[5]	3,715[5]
4	101·1	*−18·1*	41·0	30·1	*−14·6*	16·5	4,719	3,769
1976 *1*	116·6	*− 5·5*	49·3	30·7	*−13·9*	16·3	5,480	4,076
2	111·4	*+23·6*	44·7	31·6	*+ 3·3*	16·1	5,731	3,887
3	106·4	*− 1·5*	45·3	30·5	*− 0·2*	15·6	5,375	3,785
4	110·0	*+ 8·9*	49·0	31·2	*+ 3·7*	15·2	5,650	4,056
1977 *1*	105·4	*− 9·7*	49·3	34·7	*+13·2*	18·6	5,417	3,744
2	116·9	*+ 5·0*	49·9	32·4	*+ 2·5*	16·3	4,908	3,758
3	108·8	*+ 2·3*	41·9	33·9	*+11·0*	16·5	5,419	3,974
4	107·5	*− 2·3*	46·5	31·8	*+ 1·7*	14·3	4,641	3,824
1978 *1*	116·8	*+10·8*	49·2	33·7	*− 3·1*	16·1	4,957	4,202
2	112·9	*− 3·5*	42·2	35·4	*+ 9·2*	15·4	5,285	
1976 *O*	115·0	*+21·2*	48·0	31·6	*+ 3·0*	16·1	1,718	..
N	113·6	*+11·3*	50·3	33·6	*+13·7*	16·2	1,849	..
D	101·4	*− 4·5*	48·6	28·5	*− 5·4*	13·2	2,083[6]	..
1977 *J*	120·7	*+22·0*	57·6	36·7	*+27·3*	19·1	1,803	..
F	98·6	*−22·8*	47·1	33·3	*+ 5·4*	17·9	1,631	..
M	96·9	*−21·5*	43·2	34·2	*+ 8·2*	18·6	1,983[6]	..
A	121·5	*+18·4*	51·6	32·2	*+ 5·2*	17·5	1,453	..
M	121·6	*+ 6·5*	53·0	35·9	*+ 9·9*	17·8	1,536	..
J	107·6	*− 8·3*	45·0	29·2	*− 7·7*	13·5	1,919[6]	..
J	105·3	*−19·5*	40·7	33·4	*+ 1·8*	16·6	1,703	..
A	101·6	*+20·2*	35·7	34·3	*+25·7*	16·7	1,996[6]	..
S	119·6	*+15·0*	49·4	33·9	*+ 7·9*	16·1	1,720	..
O	103·0	*−10·5*	47·6	33·3	*+ 5·3*	15·2	1,506	..
N	103·9	*− 8·5*	46·0	29·9	*−11·0*	12·8	1,846[6]	..
D	115·7	*+14·0*	45·9	32·1	*+12·7*	15·0	1,289	..
1978 *J*	112·2	*− 7·1*	46·9	33·5	*− 8·7*	16·3	1,340	..
F	112·4	*+13·9*	43·9	31·1	*− 6·9*	15·2	1,523	..
M	125·9	*+30·0*	56·8	36·4	*+ 6·5*	16·9	2,094[6]	..
A	121·4	*− 0·1*	50·6	36·3	*+12·8*	16·7	1,684	..
M	106·2	*−12·6*	40·1	35·4	*− 1·4*	15·2	2,007[6]	..
J	111·0	*+ 3·1*	35·9	34·5	*+18·3*	14·4	1,594	..

[1] Monthly averages or standardised calendar months.
[2] From January 1974 the totals are for 'useable steel' in accordance with the system used by the EEC and the International Iron and Steel Institute.
[3] The seasonally adjusted quarterly figures are not constrained to sum to the annual totals.
[4] 53-week period; reduced to 52-week basis for comparison purposes.
[5] 14-week period; reduced to 13-week basis for comparison purposes.
[6] Five-week periods.


Thousands, seasonally adjusted
Production of passenger cars
180
160
140
120
100
80
60
40
20
0
Total
of which:
For export
Production of commercial vehicles
40
20
0
Total
of which:
For export
1972
1973
1974
1975
1976
1977
1978

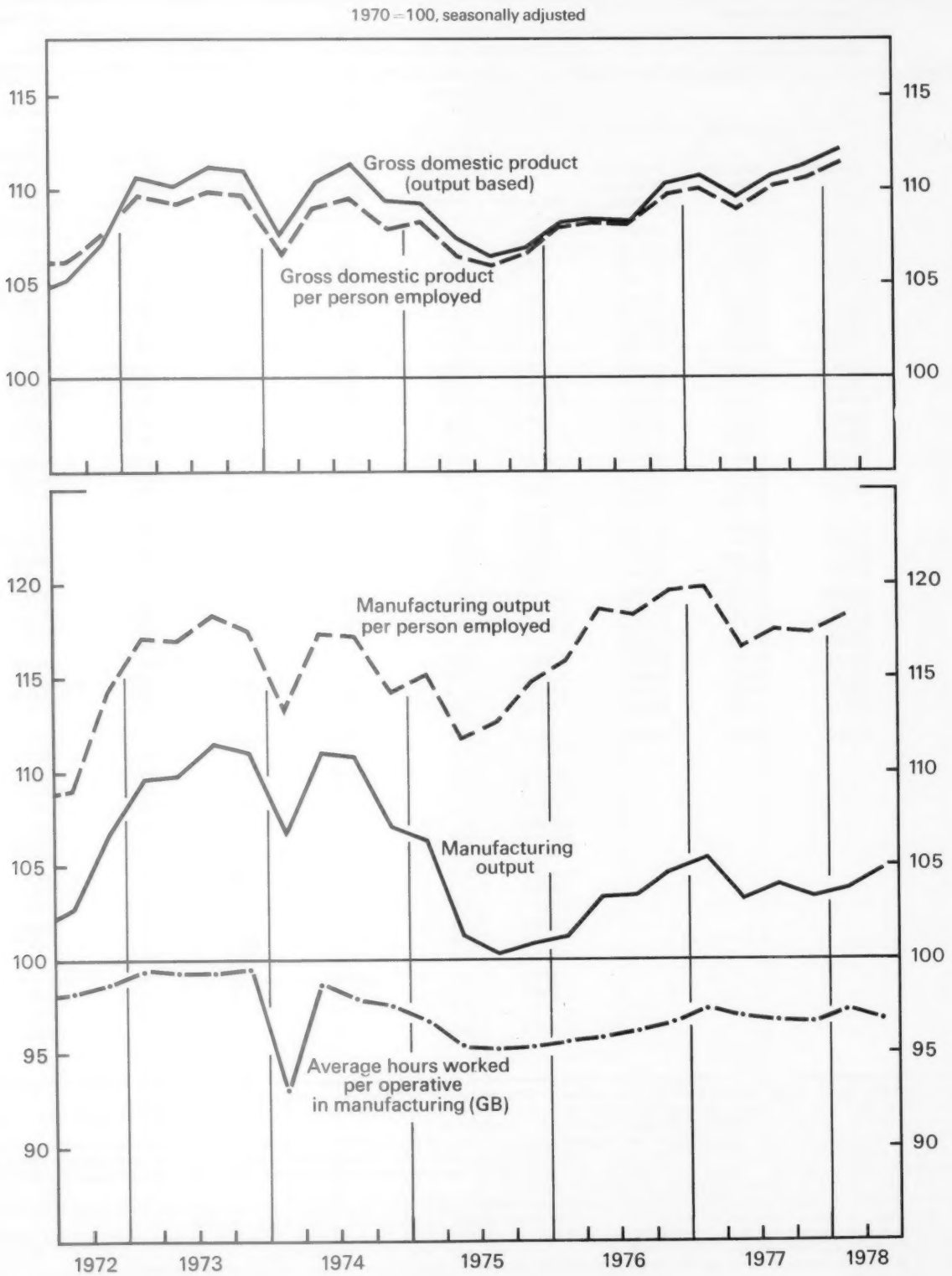
Output per person employed

Seasonally adjusted

1970=100

	Total employed labour force	Employment		Output per person employed[1]		
		Index of production industries	Manufacturing industries	Whole economy	Index of production industries	Manufacturing industries
1967	100·9	101·9	99·6	91·6	90·0	90·2
1968	100·5	101·6	99·0	95·9	95·7	97·0
1969	100·4	101·4	100·3	97·9	98·5	99·3
1970	100·0	100·0	100·0	100·0	100·0	100·0
1971	98·3	96·9	96·7	103·3	103·3	102·8
1972	99·0	94·7	93·6	105·5	108·0	109·0
1973	101·1	95·8	94·1	109·5	114·8	117·4
1974	101·3	95·5	94·3	108·2	111·3	115·5
1975	100·7	91·5	90·1	106·7	109·9	113·4
1976	100·2[2]	89·3[2]	87·3[2]	108·5[2]	113·4	118·2[2]
1977	100·5	89·5	88·1	109·9	114·6†	117·8
1971 *1*	98·6	98·4	98·6	101·6	101·3	100·6
2	98·6	97·4	97·3	102·8	103·3	102·9
3	97·9	96·4	96·1	104·1	103·7	103·3
4	97·9	95·4	94·9	104·7	104·8†	104·3
1972 *1*	98·5	94·8	94·0	102·4	102·0	103·2
2	98·6	94·6	93·6	106·0	108·7	108·7
3	99·0	94·5	93·5	106·2	109·3	109·9
4	99·7	94·8	93·3	107·5	112·1	114·4
1973 *1*	100·9	95·5	93·7	109·6	115·2	117·1
2	101·0	95·8	94·0	109·1	114·5	117·0
3	101·1	95·9	94·2	109·9	115·4	118·4
4	101·2	95·9	94·5	109·7	114·4	117·5
1974 *1*	101·0	95·7	94·3	106·4	108·4	113·1
2	101·3	95·6	94·5	109·0	113·4	117·5
3	101·6	95·3	94·5	109·5	113·7	117·2
4	101·4	95·3	93·8	107·8	109·7	114·1
1975 *1*	100·9	93·2	92·5	108·2	111·5	115·1
2	100·8	91·8	90·7	106·4	108·9	111·7
3	100·6	91·0	89·1	105·8	108·6	112·6
4	100·4	90·0	87·9	106·4	110·7	114·8
1976 *1*	100·1	89·6	87·3	108·0	111·7	115·9
2	100·1	89·3	87·1	108·3	113·7	118·6
3[2]	100·2	89·2	87·3	108·1	113·1	118·4
4	100·4	89·2	87·5	109·8	115·4	119·7
1977 *1*	100·5	89·5	87·9	110·0	115·3	119·8
2	100·6	89·8	88·3	108·8	113·5	116·6
3	100·5	89·6	88·3	110·0	114·7	117·6
4	100·5	89·2	87·9	110·5	114·7	117·5
1978 *1*	100·6	89·4	88·0	111·3	115·5	118·4
2						
	Percentage change, quarter on corresponding quarter of previous year					
1975 *3*	*−1·0*	*−4·5*	*−5·7*	*−3·4*	*−4·5*	*−3·9*
4	*−1·0*	*−5·6*	*−6·3*	*−1·3*	*+0·9*	*+0·6*
1976 *1*	*−0·8*	*−3·9*	*−5·6*	*−0·2*	*+0·2*	*+0·7*
2	*−0·7*	*−2·7*	*−4·0*	*+1·8*	*+4·4*	*+6·2*
3	*−0·4*	*−2·0*	*−2·0*	*+2·2*	*+4·1*	*+5·2*
4	—	*−0·9*	*−0·5*	*+3·2*	*+4·2*	*+4·3*
1977 *1*	*+0·4*	*−0·1*	*+0·7*	*+1·9*	*+3·2*	*+3·4*
2	*+0·5*	*+0·6*	*+1·4*	*+0·5*	*−0·2*	*−1·7*
3	*+0·3*	*+0·4*	*+1·1*	*+1·8*	*+1·4†*	*−0·7*
4	*+0·1*	—	*+0·5*	*+0·6*	*−0·6*	*−1·8*
1978 *1*	*+0·1*	*−0·1*	*+0·1*	*+1·2*	*+0·2*	*−1·2*
2						

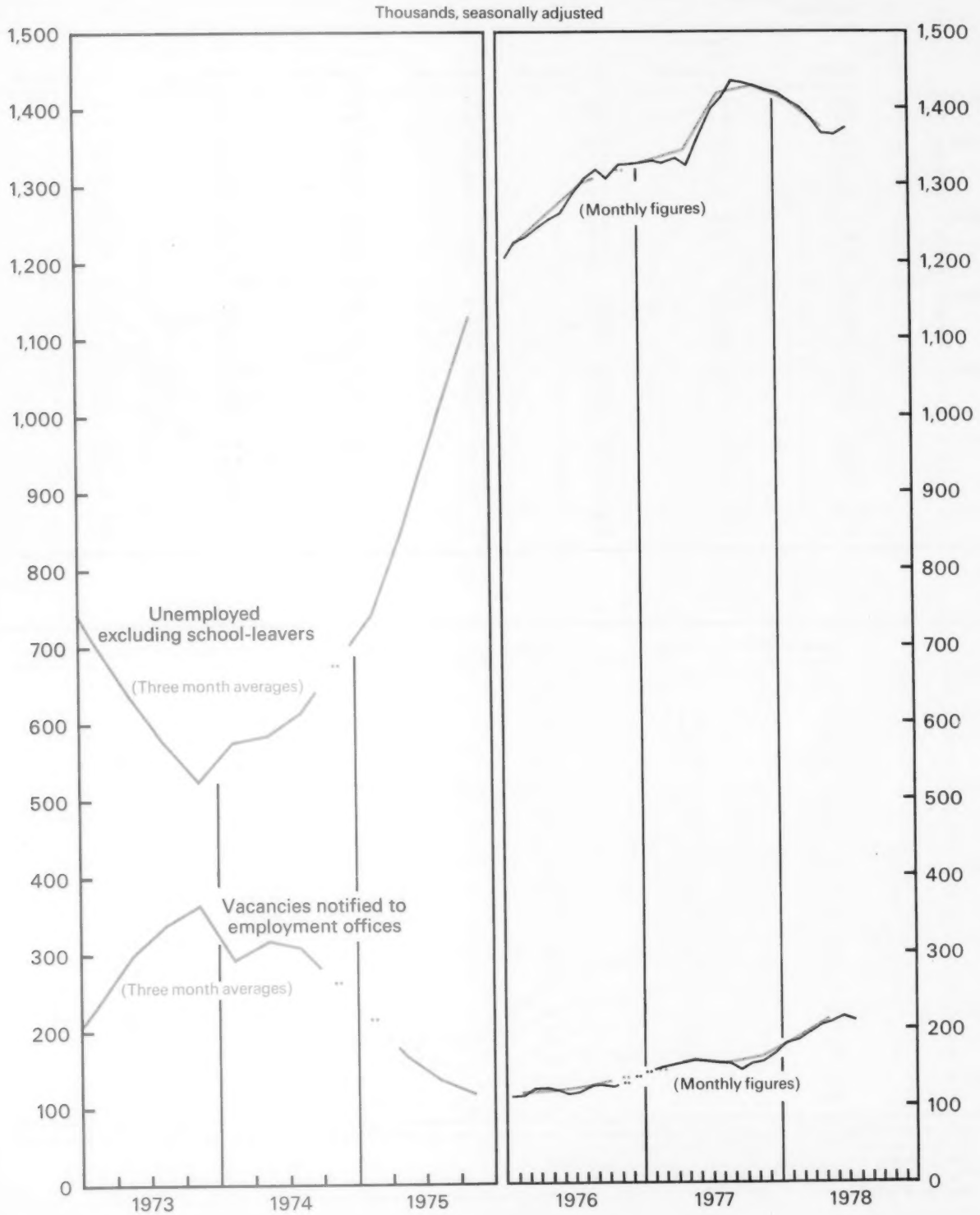
[1] The ratios do not take into account part-time working or hours of work.
[2] Figures after June 1976 are provisional.


1970 = 100, seasonally adjusted
115
110
105
100
Gross domestic product
(output based)
Gross domestic product
per person employed
120
115
110
105
100
95
90
Manufacturing output
per person employed
Manufacturing
output
Average hours worked
per operative
in manufacturing (GB)
1972
1973
1974
1975
1976
1977
1978

National employment and unemployment[1]

	Seasonally adjusted								Unadjusted
	United Kingdom						Great Britain Manufacturing industry		United Kingdom
	Thousands			Unemployed excluding school leavers		Thousands	1970=100		Thousands
	Working population[2]	Employed labour force[2]	Employees in employment[2,3]	Thousands	Percentage of employees[4]	Vacancies notified to employment offices§	Employees in employment[2,3]	Average hours worked per operative[8]	Total unemployed including school leavers
1967	25,526	24,980	22,801	547·2	*2·3*	175·1	99·9	100·2	556·7
1968	25,412	24,826	22,640	574·4	*2·4*	189·5	99·0	100·9	583·3
1969	25,406	24,841	22,608	566·3	*2·4*	202·0	100·3	101·0	576·2
1970	25,336	24,732	22,458	602·0	*2·6*	188·3	100·2	100·0	612·2
1971	25,166	24,390	22,113	775·8	*3·4*	130·9	96·8	98·1	792·1
1972	25,243	24,384	22,114	854·9	*3·7*	147·3	93·4	97·6	875·6
1973	25,599	24,969	22,661	611·0	*2·6*	307·0	94·0	99·4	618·8
1974	25,656	25,061	22,791	599·7[5]	*2·6*[5]	301·6[5]	94·6	96·7	614·9[5]
1975	25,846	24,931	22,709	929·1	*3·9*	148·1[6]	90·0	95·6	977·6
1976	26,136†	24,761	22,539	1,269·9[5]	*5·3*[5]	120·0[6]	87·1	96·0	1,358·8[5]
1977	26,367	24,874	22,661	1,378·1	*5·8*	155·6[5]	88·4	96·9	1,483·6
1973 *3*	25,537†	25,004†	22,704†	578·8	*2·5*	336·0	94·0	99·4	568·5
4	25,540	25,030	22,739	524·7	*2·3*	360·7	94·7	99·5	521·9
1974 *1*	25,580	24,984	22,704	574·5	*2·5*	292·6	94·2	93·0	624·9
2	25,656	25,061	22,791	581·6	*2·5*	317·9	94·6	98·6	570·2
3	25,752	25,141	22,879	613·0	*2·6*	308·2	94·3	97·9	628·3
4	..[7]	25,076	22,828	..[7]	..[7]	..[7]	93·3	97·5	..[7]
1975 *1*	25,760	24,965	22,732	735·2	*3·1*	..[7]	92·0	96·7	788·7
2	25,846	24,931	22,709	858·5	*3·6*	163·0	90·0	95·3	853·8
3	25,971	24,879	22,653	994·6	*4·2*	133·8	88·6[8]	95·2	1,095·5
4	26,028	24,822	22,597	1,128·2	*4·8*	115·5	87·7	95·3	1,172·3
1976 *1*	26,048	24,756	22,533	1,219·9	*5·1*	114·7	87·1	95·5	1,297·5
2	26,136	24,761	22,539	1,260·7	*5·3*	118·1	87·1	95·8	1,294·9
3	26,166[8]	24,775	22,551[8]	1,300·1	*5·4*	125·0	87·3	96·1	1,473·7
4	26,207	24,828	22,608	..[9]	..[9]	..[7]	87·6	96·5	..[9]
1977 *1*	26,246	24,847	22,631	1,329·5	*5·6*	..[7]	88·0	97·4	1,417·8
2	26,367	24,874	22,661	1,340·6	*5·6*	157·7	88·4	96·9	1,394·7
3	26,402	24,864	22,650	1,414·6	*5·9*	151·9	88·1	96·7	1,622·4
4	26,347	24,856	22,646	1,427·8	*6·0*	160·1	87·9	96·6	1,499·4
1978 *1*	26,362	24,879	22,672	1,409·4	*5·9*	187·7	88·0	97·3	1,506·1
2				1,372·7	*5·7*	210·3	87·9	96·9	1,428·2
1977 *A*	..	..	..	1,333·8	*5·6*	155·5	88·2	96·9	1,392·3
M	..	..	..	1,323·8	*5·5*	159·4	88·3	97·0	1,341·7
J	..	..	..	1,364·3	*5·7*	158·1	88·4	96·8	1,450·1
J	..	..	..	1,398·5	*5·9*	155·2	88·4	96·8	1.622·4
A	..	..	..	1,410·3	*5·9*	153·4	88·2	97·0	1,635·8
S	..	..	..	1,434·9	*6·0*	147·2	88·1	96·4	1,609·1
O				1,431·5	*6·0*	156·0	88·0	96·7	1,518·3
N	..	..	..	1,429·6	*6·0*	159·4	87·9	96·5	1,499·1
D	..	..	..	1,422·3	*6·0*	165·0	87·9	96·7	1,480·8
1978 *J*	..	..	..	1,419·2	*5·9*	180·3	87·9	97·2	1,548·5
F	..	..	..	1,409·0	*5·9*	187·0	88·0	97·1	1,508·7
M	..	..	..	1,400·0	*5·9*	195·8	88·0	97·5	1,461·0
A	..	..	..	1,387·1	*5·8*	203·7	87·9	97·1	1,451·8
M	..	..	..	1,366·4	*5·7*	209·9	87·8	97·1	1,386·8
J	..	..	..	1,364·7	*5·7*	217·4	87·9	96·6	1,446·1
J	..	..	..	1,371·4	*5·7*	211·0			1,585·8
A									
S									

[1] Unemployment figures do not include adult students registered for temporary employment during a current vacation.
[2] The working population consists of the employed labour force and the unemployed (including school-leavers); the employed labour force includes employers, self-employed and HM Forces as well as employees in employment.
[3] From 1971, the employees in employment estimates are based on annual census of employment. For the years before 1971 estimates are taken from the continuous employment series published in the October 1975 issue of the *Department of Employment Gazette*. Annual estimates relate to mid-year. From June 1976 the employee in employment figures for the UK which are provisional until the publication of the results of the Census of Employment for June 1977, include a constant component for Northern Ireland.
[4] The base used in calculating the percentage rate of unemployment is the appropriate mid-year estimate of total employees (employed and unemployed): the latest figure available is that for mid-1976.
[5] The figures shown are averages of eleven months figures.
[6] The figures shown are averages of ten months figures.
[7] Figure not available due to industrial action. For further details see note to page 129 of the *Department of Employment Gazette*, February 1975.
[8] Estimates after June 1976 are provisional.
[9] Because of industrial action by some staff in the Department of Employment group, figures for these months are not available.


Thousands, seasonally adjusted
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
Unemployed
excluding school-leavers
(Three month averages)
Vacancies notified to
employment offices
(Three month averages)
(Monthly figures)
(Monthly figures)
1973
1974
1975
1976
1977
1978

Regional unemployment rates[1]

Seasonally adjusted

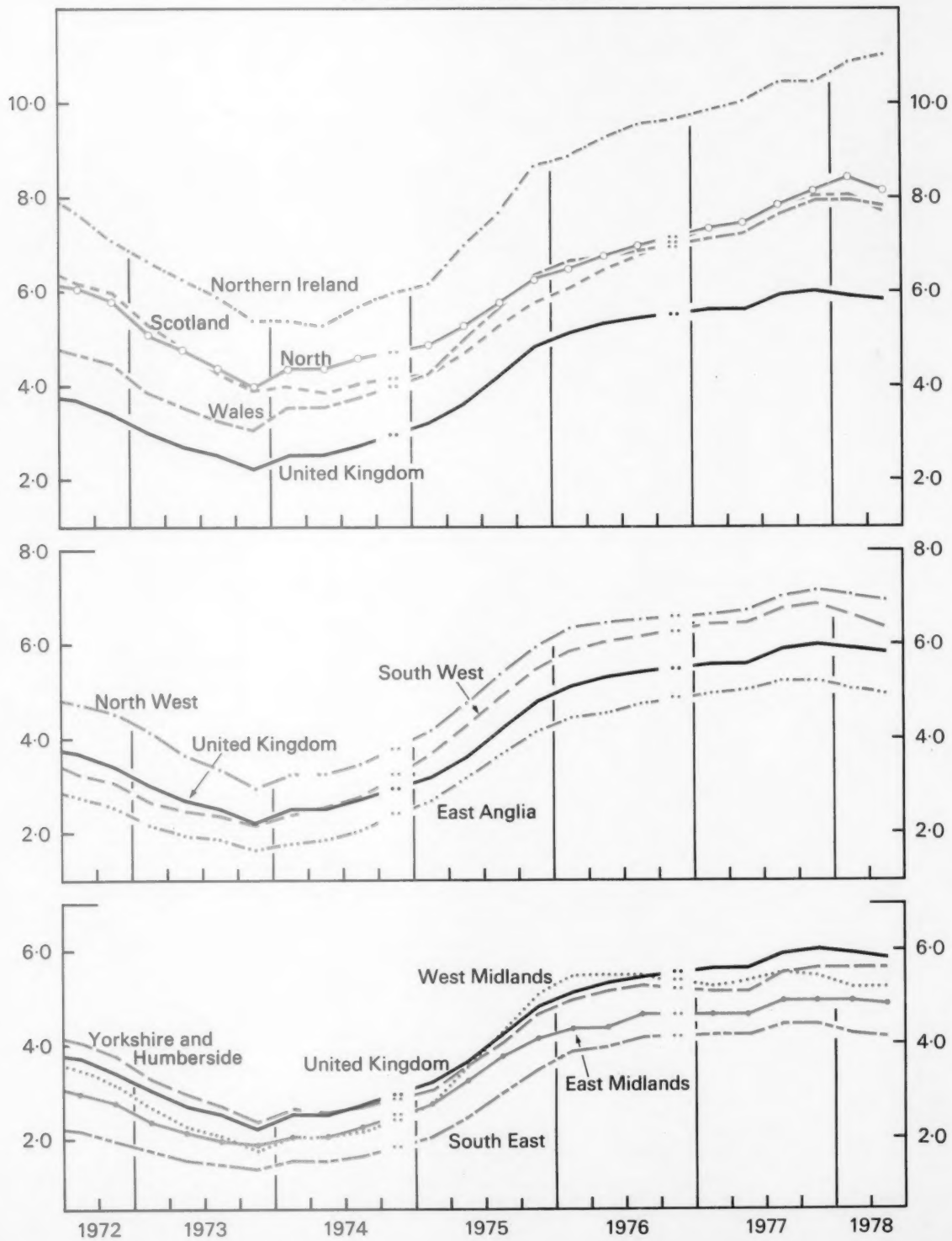
Per cent

	North[2]	Yorkshire and Humberside[2]	East Midlands[2]	East Anglia	South East[2]	South West[2]	West Midlands
1972 *3*	6·0	4·0	2·9	2·7	2·1	3·2	3·4
4	5·7	3·7	2·7	2·5	1·9	3·0	3·1
1973 *1*	5·0	3·2	2·3	2·1	1·7	2·6	2·6
2	4·7	2·9	2·1	1·9	1·5	2·4	2·2
3	4·3	2·6	1·9	1·8	1·4	2·3	2·0
4	3·9	2·3	1·8	1·6	1·3	2·1	1·7
1974 *1*	4·3	2·6	2·0	1·7	1·5	2·3	2·0
2	4·3	2·5	2·0	1·8	1·5	2·5	2·0
3	4·5	2·6	2·2	2·0	1·6	2·7	2·1
4	..[3]	..[3]	..[3]	..[3]	..[3]	..[3]	..[3]
1975 *1*	4·8	3·0	2·7	2·6	2·0	3·6	2·7
2	5·2	3·5	3·2	3·1	2·4	4·2	3·5
3	5·7	4·0	3·7	3·6	2·9	4·8	4·2
4	6·2	4·6	4·1	4·1	3·4	5·4	5·0
1976 *1*	6·4	4·9	4·3	4·4	3·8	5·8	5·4
2	6·7	5·1	4·3	4·5	3·9	6·0	5·4
3	6·9	5·2	4·6	4·7	4·1	6·1	5·4
4	..[4]	..[4]	..[4]	..[4]	..[4]	..[4]	..[4]
1977 *1*	7·3	5·1	4·6	4·9	4·2	6·4	5·2
2	7·4	5·1	4·6	5·0	4·2	6·4	5·3
3	7·8	5·5	4·9	5·2	4·4	6·7	5·5
4	8·1	5·6	4·9	5·2	4·4	6·8	5·4
1978 *1*	8·4	5·6	4·9	5·0	4·2	6·6	5·2
2	8·1	5·6	4·8	4·9	4·1	6·3	5·2

	North West[2]	Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
1972 *3*	4·7	4·6	6·1	3·6	7·6	3·7
4	4·5	4·4	5·9	3·4	7·0	3·4
1973 *1*	4·1	3·8	5·2	3·0	6·6	3·0
2	3·6	3·5	4·7	2·7	6·2	2·7
3	3·3	3·2	4·2	2·4	5·7	2·5
4	2·9	3·0	3·8	2·2	5·3	2·3
1974 *1*	3·2	3·5	3·9	2·4	5·3	2·5
2	3·2	3·5	3·8	2·4	5·2	2·5
3	3·4	3·7	3·9	2·6	5·6	2·6
4	..[3]	..[3]	..[3]	..[3]	5·9	..[3]
1975 *1*	4·1	4·2	4·2	3·1	6·1	3·1
2	4·7	4·9	4·6	3·6	6·9	3·6
3	5·3	5·6	5·2	4·1	7·6	4·2
4	5·9	6·3	5·7	4·7	8·6	4·8
1976 *1*	6·3	6·6	6·0	5·0	8·8	5·1
2	6·4	6·7	6·4	5·2	9·2	5·3
3	6·5	6·8	6·7	5·4	9·5	5·4
4	..[4]	..[4]	..[4]	..[4]	9·6	..[4]
1977 *1*	6·6	7·1	7·3	5·5	9·8	5·6
2	6·7	7·2	7·4	5·5	10·0	5·6
3	7·0	7·6	7·8	5·8	10·4	5·9
4	7·1	7·9	8·0	5·9	10·4	6·0
1978 *1*	7·0	7·9	8·0	5·8	10·8	5·9
2	6·9	7·8	7·7	5·6	11·0	5·8

[1] Numbers unemployed excluding school-leavers expressed as a percentage of the appropriate mid-year estimate of total employees (employed and unemployed). The latest figure available is that for mid-1976.
[2] The boundaries of the standard regions were revised in April 1974.
[3] Figure not available due to industrial action. For further details see note on page 129 of the *Department of Employment Gazette*, February 1975.
[4] Because of industrial action by some staff in the Department of Employment group, figures are not available.

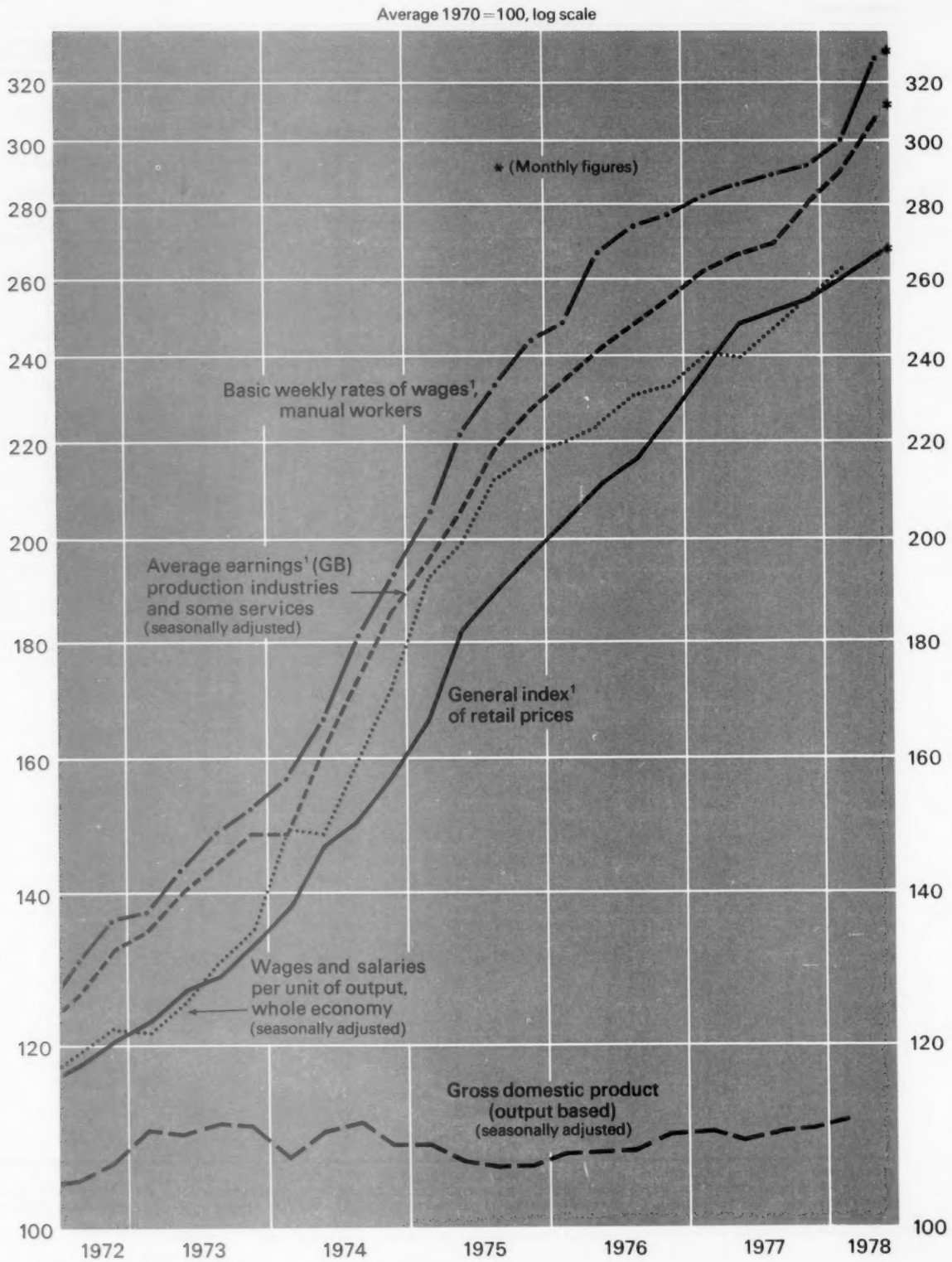
Percentage rates, seasonally adjusted



Wage rates and earnings

	Unadjusted				Seasonally adjusted					
	31 July 1972 =100[1]		January 1976 =100		January 1970 =100				1970 =100	
	Basic weekly wage rates (manual workers)		Average earnings (GB)						Wages and salaries per unit of output	
	All industries and services	Manufacturing industry	New series: whole economy	*Percentage increase on year earlier*	Older series: production industries and some services	*Percentage increase on year earlier*	Manufacturing industry	*Percentage increase on year earlier*	Whole economy	Manufacturing industry
1967	63·9	63·6	..	..	81·8	*3·6*	81·1	*3·6*	86·2	82·9
1968	68·1	68·4	..	..	88·2	*7·8*	87·8	*8·2*	88·2	83·1
1969	71·7	72·1	..	..	95·2	*7·8*	94·9	*8·1*	91·1	88·4
1970	78·8	79·4	..	..	106·7	*12·1*	107·0	*12·7*	100·0	100·0
1971	89·0	89·3	..	..	118·7	*11·3*	118·9	*11·2*	109·0	108·8
1972	101·3	101·5	..	..	134·0[2]	..[3]	134·2[2]	..[3]	118·7	113·4
1973	115·2	114·6	..	..	152·1	..[3]	151·5	..[3]	128·2	121·2
1974	138·0	134·3	..	..	179·1	*17·8*	177·5	*17·2*	157·9	150·0
1975	178·7	174·4	..	..	226·6	*26·5*	223·8	*26·1*	205·7	195·7
1976	213·2	209·0	106·0	..	261·9	*15·6*	260·8	*16·5*	227·3	221·0
1977	227·2	218·9	115·6	*9·0*	288·5	*10·2*	287·6	*10·3*	246·3	
1972 *1*	96·0	95·5	..	..	126·4[3]	..[3]	126·8[3]	..[3]	116·5	..[3]
2	98·1	98·2	..	..	130·7	*11·6*	131·4	*11·9*	116·8	112·8
3	103·4	104·6	..	..	134·9	*12·1*	135·7	*12·7*	119·3	114·6
4	107·9	107·6	..	..	141·5	*15·5*	140·5	*14·4*	122·1	114·4
1973 *1*	108·7	108·1	..	..	144·4	..[3]	143·7	..[3]	121·7	114·7
2	113·4	111·7	..	..	150·2	*14·9*	149·6	*13·8*	125·2	119·2
3	118·1	117·8	..	..	154·5	*14·5*	153·6	*13·2*	130·7	122·4
4	120·6	120·7	..	..	159·2	*12·5*	159·1	*13·3*	135·1	128·6
1974 *1*	124·3	122·7	..	..	157·8[4]	*9·2*[4]	157·4[4]	*9·5*[4]	149·7	133·8
2	131·7	128·0	..	..	172·5	*14·9*	171·2	*14·5*	148·9	142·7
3	143·2	139·4	..	..	185·1	*19·9*	184·0	*19·7*	159·6	154·1
4	152·7	147·1	..	..	199·6	*25·4*	197·5	*24·2*	173·6	169·7
1975 *1*	162·7	155·1	..	..	209·5	*32·7*	207·4	*31·8*	192·5	179·1
2	175·3	171·9	..	..	220·2	*27·6*	216·8	*26·6*	199·7	192·6
3	184·3	180·5	..	..	234·0	*26·4*	230·7	*25·4*	213·2	202·8
4	192·6	190·1	..	..	242·7	*21·6*	240·6	*21·8*	217·6	208·5
1976 *1*	204·2	201·5	101·0	..	250·8	*19·7*	249·1	*20·1*	220·8	214·5
2	211·5	209·0	105·2	..	258·7	*17·5*	258·3	*19·2*	224·5	217·9
3	217·8	212·5	107·9	..	265·4	*13·4*	264·5	*14·7*	231·0	224·0
4	219·3	213·1	110·1	..	272·6	*12·3*	271·3	*12·8*	232·9	227·7
1977 *1*	223·3	215·7	111·8	*10·7*	280·0	*11·7*	278·5	*11·8*	241·3	234·5
2	225·9	217·9	114·5	*8·8*	285·3	*10·3*	284·2	*10·0*	240·0	244·0
3	228·7	220·2	116·2	*7·7*	288·3	*8·7*	287·3	*8·6*	247·4	247·2
4	231·1	221·7	119·9	*8·9*	300·4	*10·2*	300·3	*10·7*	256·6	257·1
1978 *1*	237·6	225·8	123·1	*10·1*	310·8	*11·0*	311·5	*11·8*	263·6	265·3
2	259·9†	263·2†	129·9[5]	*13·5*[5]	328·9[5]	*15·3*[5]	328·3[5]	*15·5*[5]		
1977 *A*	224·7	216·8	113·1	*9·4*	283·6	*11·1*	283·0	*11·2*	..	240·5
M	225·5	218·0	114·9	*9·0*	285·7	*10·2*	284·7	*10·0*	..	245·6
J	227·4	218·9	115·4	*8·2*	286·5	*9·6*	284·9	*9·0*	..	245·9
J	228·2	219·3	116·2	*8·1*	286·3	*8·9*	285·4	*9·0*	..	247·3
A	228·8	220·4	115·7	*7·3*	287·7	*8·0*	286·5	*8·1*	..	245·7
S	229·0	220·9	116·6	*7·7*	291·0	*9·1*	290·0	*8·9*	..	248·7
O	229·4	221·1	117·9	*8·7*	295·3	*9·6*	294·6	*9·5*	..	252·7
N	231·1	222·0	120·1	*8·6*	300·5	*10·3*	300·7	*11·4*	..	257·5
D	232·9	222·0	121·7	*9·4*	304·8	*10·6*	305·6	*11·2*	..	261·0
1978 *J*	236·5	225·4	121·5	*9·5*	306·3	*10·2*	307·9	*11·4*	..	263·3
F	237·7	225·7	122·7	*10·5*	311·2	*11·5*	311·6	*12·1*	..	264·9
M	238·6	226·3	125·0	*10·4*	314·8	*11·2*	315·0	*12·0*	..	267·8
A	258·2	261·8	127·2	*12·4*	325·7	*14·8*	327·4	*15·7*	..	271·2
M	259·2	263·4	129·4	*12·6*	327·2	*14·5*	325·9	*14·5*	..	
J	262·3†	264·3†	133·1[5]	*15·4*[5]	333·8[5]	*16·5*[5]	331·6[5]	*16·4*[5]	..	
J	262·6[5]	264·4[5]								
A										
S										

[1] Prior to July 1972 the series was based on 31 January 1956 =100. Figures before July 1972 have therefore been linked.
[2] Average of 11 months. See footnote[3].
[3] In the absence of earnings data for February 1972 due to the effects of the coalmining dispute, no index of wages and salaries per unit of output or index of average earnings has been calculated for that month. The indices calculated for January and March 1972 are less reliable than usual.
[4] The figures reflect temporary reductions in earnings while three-day working and other restrictions were in operation.
[5] Provisional.



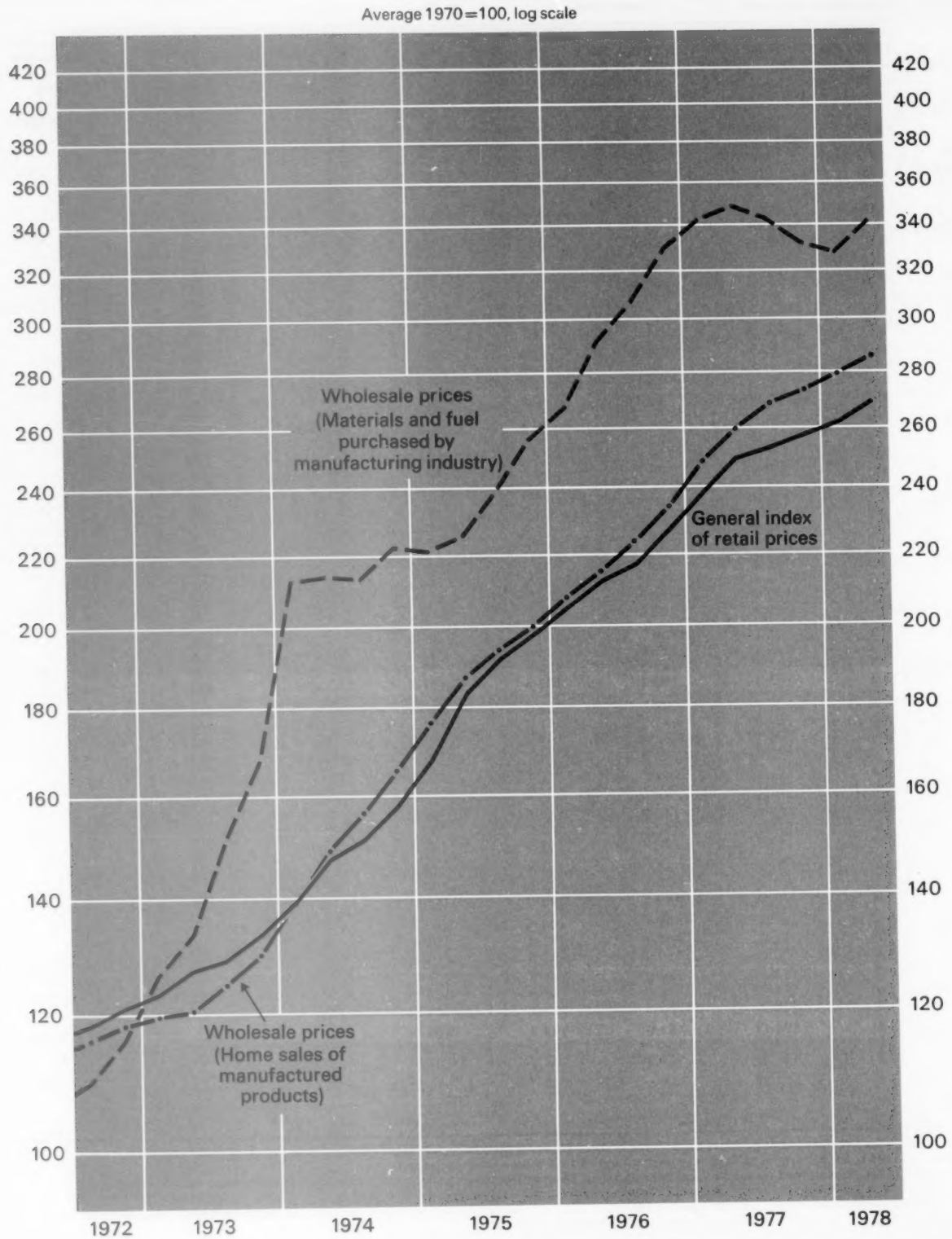
[1] Quarterly average of monthly figures.

Prices

Unadjusted

	Average 1970=100										Average 1970=100 p
	Wholesale prices index		General index of retail prices						Pensioner price index[1]		
	Materials and fuel purchased by manufacturing industry[2]	Output All manufactured products Home sales[3]	All items Index	All items *Percentage increase on year earlier*	Total food	Total non-food	All items other than seasonal food Index	All items other than seasonal food *Percentage increase on year earlier*	One person household	Two person household	Purchasing power of the pound[4]
1967	83·8	86·5	85·2	*2·5*	84·6	85·4	85·2	*2·4*	84·9	85·0	117
1968	91·5	89·9	89·2	*4·7*	87·9	89·6	89·3	*4·8*	88·8	88·8	112
1969	95·0	93·4	94·0	*5·4*	93·5	94·2	93·9	*5·2*	93·5	93·7	106
1970	100·0	100·0	100·0	*6·4*	100·0	100·0	100·0	*6·5*	100·0	100·0	100
1971	104·6	109·0	109·4	*9·4*	111·1	108·9	109·5	*9·5*	110·1	109·9	91
1972	109·2	114·8	117·2	*7·1*	120·9	116·0	117·0	*6·9*	118·5	118·0	85
1973	144·5	123·2	128·0	*9·2*	139·1	124·4	126·7	*8·3*	130·0	130·1	78
1974	215·3	152·0	148·5	*16·1*	164·2	143·4	147·0	*16·0*	150·9	151·1	67
1975	235·4	188·7	184·4	*24·2*	206·1	177·5	182·6	*24·2*	189·8	189·4	54
1976	299·0	219·6	215·0	*16·5*	247·4	205·1	211·4	*15·8*	226·2	225·0	47
1977	340·1	261·7	249·0	*15·8*	294·4	253·6	245·2	*16·0*	264·2	262·7	40
1972 *1*	105·6	112·1	113·9	*8·0*	117·8	112·6	113·9	*7·9*	115·9	115·3	88
2	106·1	113·5	116·0	*6·2*	119·0	115·0	115·9	*6·3*	117·3	116·7	86
3	109·4	115·6	118·0	*6·5*	122·3	116·5	117·8	*6·2*	119·1	118·8	85
4	115·6	118·0	120·8	*7·7*	124·7	119·6	120·7	*7·4*	122·0	121·4	83
1973 *1*	126·0	119·5	123·0	*8·0*	131·1	120·3	122·2	*7·3*	125·0	124·9	81
2	133·3	120·1	126·9	*9·3*	137·4	123·5	125·2	*8·1*	129·0	129·1	79
3	150·9	124·2	128·8	*9·2*	139·8	125·3	127·7	*8·5*	130·2	130·4	78
4	167·6	129·1	133·2	*10·3*	148·1	128·5	131·8	*9·2*	135·7	135·9	75
1974 *1*	212·5	138·3	138·8	*12·9*	156·2	133·3	137·2	*12·3*	142·2	142·2	72
2	213·7	148·9	147·0	*15·9*	161·7	142·2	145·3	*16·0*	148·0	148·8	68
3	212·9	156·1	150·7	*17·0*	164·5	146·1	149·4	*17·0*	152·7	152·9	66
4	222·1	164·9	157·5	*18·2*	174·3	152·0	156·1	*18·5*	160·7	160·5	64
1975 *1*	220·9	176·0	167·0	*20·3*	188·5	160·2	165·6	*20·7*	170·6	170·3	60
2	225·6	186·3	182·7	*24·3*	205·9	175·4	180·7	*24·4*	188·9	188·5	55
3	239·3	193·4	190·7	*26·5*	211·3	184·0	189·7	*26·3*	195·8	195·7	52
4	256·1	199·1	197·3	*25·3*	218·7	190·3	195·2	*25·0*	203·9	203·1	51
1976 *1*	266·5	206·9	204·5	*22·5*	234·2	195·3	200·9	*21·3*	214·3	213·2	49
2	292·6	214·4	211·9	*16·0*	242·6	202·6	207·9	*15·1*	222·7	221·3	47
3	306·8	223·2	216·8	*13·7*	245·5	207·8	214·0	*13·4*	227·0	225·8	46
4	329·9	233·9	226·8	*15·0*	267·1	214·7	222·6	*14·0*	240·9	239·5	44
1977 *1*	341·5	248·0	238·2	*16·5*	285·7	224·3	233·1	*16·1*	251·8	251·7	42
2	347·7	259·2	248·8	*17·4*	295·5	235·0	243·9	*17·3*	262·9	262·2	40
3	340·5	267·7	252·7	*16·5*	297·2	239·6	249·8	*16·7*	268·8	266·5	40
4	330·6	272·1	256·4	*13·0*	299·0	243·7	254·2	*14·2*	273·2	270·6	39
1978 *1*	326·7	279·0	260·8	*9·5*	305·1	247·5	258·5	*10·9*	277·8	275·5	38
2	340·7[5]	284·6[5]	267·9	*7·7*	315·3	253·9	264·9	*8·6*	284·8	282·7	37
1977 *A*	349·7	255·4	246·6	*17·5*	293·3	232·9	241·4	*17·4*	..	..	41
M	348·3	259·8	248·6	*17·1*	293·7	235·1	243·9	*17·1*	..	..	40
J	345·2	262·4	251·1	*17·4*	299·6	237·1	246·4	*17·3*	..	..	40
J	344·5	265·8	251·4	*17·6*	297·0	238·1	247·9	*17·0*	..	..	40
A	338·8	268·1	252·7	*16·5*	296·8	239·6	249·8	*16·7*	..	..	40
S	338·1	269·2	254·1	*15·6*	297·7	241·1	251·6	*16·4*	..	..	39
O	333·8	271·0	255·1	*14·1*	297·4	242·5	253·0	*15·0*	..	..	39
N	329·9	272·0	256·3	*13·0*	288·4	243·8	254·3	*14·2*	..	..	39
D	328·0	273·3	257·8	*12·1*	301·3	244·7	255·3	*13·3*	..	..	39
1978 *J*	324·9	277·1	259·3	*9·9*	303·3	246·0	256·9	*11·3*	..	..	39
F	324·2	279·2	260·8	*9·5*	305·1	247·6	258·6	*11·0*	..	..	38
M	331·0	280·6	262·4	*9·1*	306·9	249·0	259·9	*10·4*	..	..	38
A	337·4	282·7	266·2	*7·9*	311·8	252·7	263·4	*9·1*	..	..	38
M	341·5	284·7	267·8	*7·7*	314·3	253·9	264·9	*8·6*	..	..	37
J	343·1[5]†	286·3[5]†	269·8	*7·4*	319·7	255·1	266·4	*8·1*	..	..	37
J	340·2[5]	288·7[5]	271·0	*7·9*	318·8	256·9	268·4	*8·3*	..	..	37
A											
S											

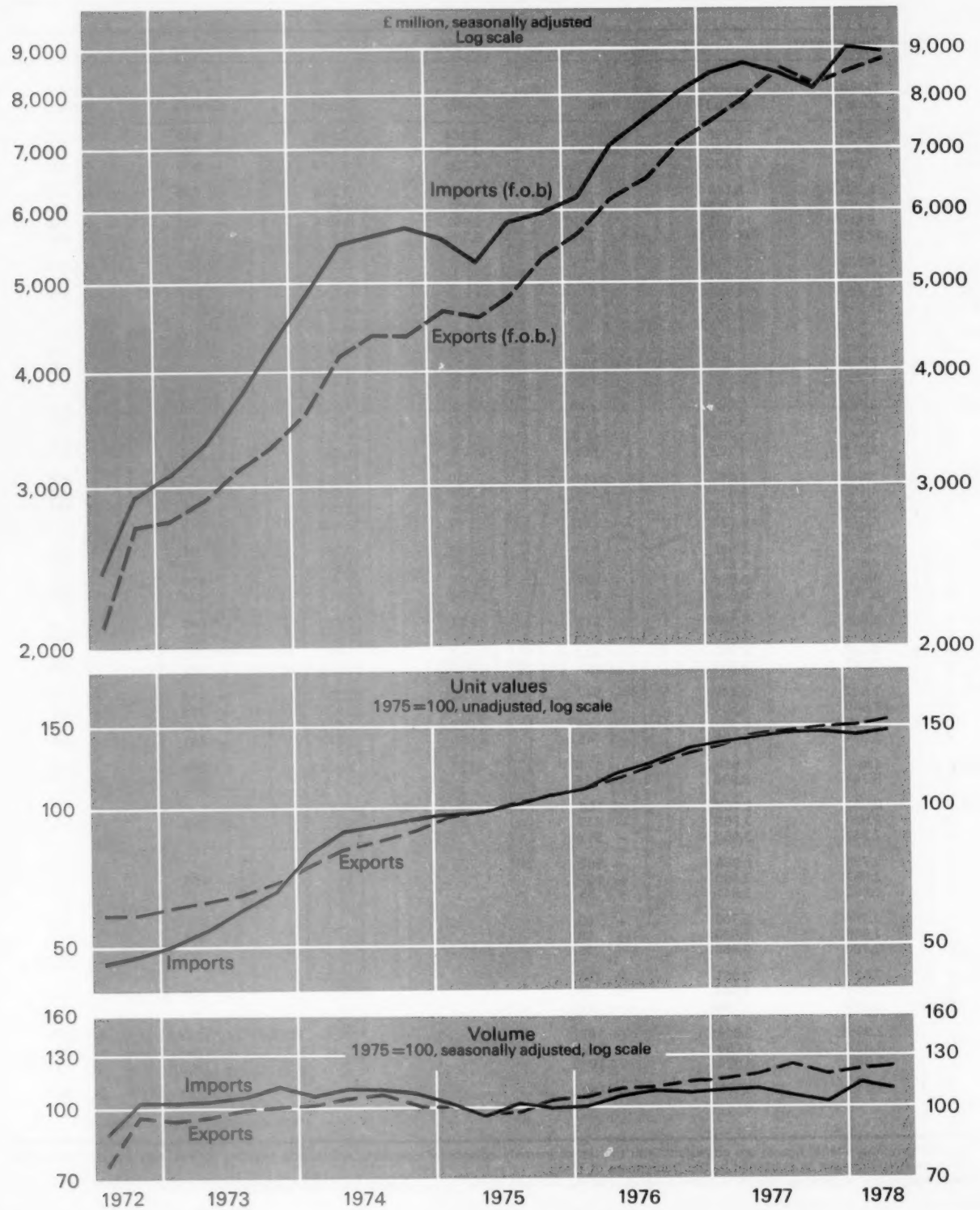
[1] All items except housing. [2] Revised method of calculation to include levies on certain imported foods from 3rd quarter 1971.
[3] Reductions in the VAT-exclusive prices of alcoholic liquor, tobacco and cigarettes, matches and mechanical lighters took place in April 1973. These reductions resulted from lower revenue duties designed to offset additional tax revenue from VAT. With unchanged prices in April for these products index numbers from 2nd quarter 1973 onwards would have been higher by 1·7.
[4] Movements in the purchasing power of the pound are based on movements in the general index of retail prices. [5] Provisional.


Average 1970=100, log scale
420
400
380
360
340
320
300
280
260
240
220
200
180
160
140
120
100
Wholesale prices (Materials and fuel purchased by manufacturing industry)
General index of retail prices
Wholesale prices (Home sales of manufactured products)
1972
1973
1974
1975
1976
1977
1978

Visible trade

	Seasonally adjusted		Unadjusted					
	1975=100		1975=100			1970=100		December 1971=100
	Volume indices[1]		Unit value indices[1]			Export price competitiveness index[3]	World commodity prices index[4]	Sterling effective exchange rate
	Exports	Imports	Exports	Imports	Terms of trade[2]			
1967	61·7	68·1	42·1	33·6	125·3	104·1	80	..
1968	69·4	75·1	45·5	37·6	121·0	98·1	91	..
1969	76·2	75·7	47·0	38·8	121·1	98·0[5]	96	..
1970	79·5	80·2	50·5	40·6	124·4	100·0	100	..
1971	84·6	83·3	53·3	42·4	125·7	102·2	105	..
1972	84·5	92·4	56·3	44·7	126·0	102·6	116	95·2
1973	96·8	105·6	63·3	57·1	110·9	94·1	168	86·3
1974	103·9	107·9	81·8	88·5	92·4	93·1	295	83·6
1975	100·0	100·0	100·0	100·0	100·0	96·5	300	77·2
1976	109·9	105·5	120·6	121·9	98·9	94·9	385	65·4
1977	118·9	107·0	142·4	141·4	100·7	100·1[6]	434	62·1
1972 *1*	82·9	88·2	55·6	43·4	128·1	105·8	109	99·6
2	84·8	92·4	56·3	43·8	128·5	105·4	110	99·0
3	74·8	87·1	58·0	45·8	126·6	101·6	119	92·1
4	95·4	102·0	58·4	47·5	122·9	97·8	127	90·2
1973 *1*	93·1	101·9	60·4	50·3	120·1	97·3	141	88·8
2	95·2	103·4	62·3	54·1	115·2	97·8	153	89·3
3	98·8	106·3	64·9	60·1	108·0	91·2	174	84·2
4	100·1	110·6	68·1	65·9	103·3	90·7	205	83·0
1974 *1*	100·7	106·5	74·8	79·3	94·3	91·2	298	83·1
2	105·9	109·5	81·0	88·9	91·1	93·5	287	84·7
3	107·2	108·9	84·9	91·5	92·8	93·7	292	84·2
4	102·0	106·8	89·1	94·1	94·7	93·8	303	82·6
1975 *1*	100·9	101·5	95·4	97·3	98·0	93·9	287	81·7
2	97·0	96·0	97·7	97·9	99·8	95·5	284	79·1
3	98·0	102·6	101·8	101·7	100·1	96·7	306	75·2
4	104·1	99·9	105·9	106·6	99·3	97·8	324	73·0
1976 *1*	106·2	100·3	109·7	109·9	99·8	99·3	338	72·0
2	109·9	106·0	115·9	118·4	97·9	94·4	381	65·8
3	110·0	108·3	122·9	124·5	98·7	95·2	395	64·1
4	113·5	107·3	130·2	133·8	97·3	90·6	423	59·6
1977 *1*	115·7	109·1	136·1	137·5	99·0	96·9	440	61·8
2	118·0	109·8	141·7	141·3	100·3	98·3	450	61·6
3	124·1	106·4	145·5	144·0	101·0	100·0	432	61·8
4	117·9	102·6	147·6	144·2	102·4	104·8[6]	413†	63·3
1978 *1*	120·3	114·3	149·6	142·4	105·1		393[6]	65·4
2	122·6	110·0	153·7	147·2	104·4		416[7]	61·5
1977 *A*	116·2	105·3	140·2	140·5	99·8	..	..	61·7
M	116·0	109·6	142·1	141·1	100·7	..	..	61·6
J	121·9	114·5	142·9	142·3	100·4	..	..	61·5
J	123·1	110·4	144·2	144·4	99·9	..	..	61·0
A	123·4	101·3	146·1	143·9	101·5	..	..	62·0
S	125·9	107·5	146·3	143·9	101·7	..	..	62·4
O	119·4	101·3	147·4	144·9	101·7	..	..	62·5
N	115·3	98·4	147·2	143·8	102·4	..	..	63·6
D	118·9	108·1	148·3	143·8	103·1	..	..	63·8
1978 *J*	112·2	114·6	149·5	141·7	105·5	..	..	66·0
F	127·4	111·3	149·2	142·3	104·8	..	..	66·0
M	121·4	116·9	150·2	143·3	104·8	..	..	64·1
A	125·9†	104·1†	151·6	145·7	104·0	..	..	61·8
M	119·9	114·1	154·7	147·2	105·1	..	..	61·5
J	121·9	111·9	154·9	148·8	104·1	..	..	61·3
J	126·9[6]	117·1[6]	115·7[6]	148·6[6]	104·8[6]	..	..	62·1
A								
S								

[1] On a balance of payments basis. These series have been revised. For further details see *Trade and Industry* of 10 February 1978.
[2] Unit value index for exports expressed as a percentage of unit value index for imports.
[3] The ratio of UK to weighted average export (dollar) prices for major competitors in respect of manufactured goods.
[4] Weighted average, in sterling terms, of United Nations Index numbers for primary commodities and non-ferrous metals.
[5] Differences in quarterly and annual averages for 1969 and 1970 are due to the effects of adjusting the UK series for export over-valuation.
[6] Provisional. [7] Projection by the Department of Industry.


£ million, seasonally adjusted
Log scale
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
Imports (f.o.b)
Exports (f.o.b.)
Unit values
1975=100, unadjusted, log scale
150
100
50
Exports
Imports
Volume
1975=100, seasonally adjusted, log scale
160
130
100
70
Imports
Exports
1972
1973
1974
1975
1976
1977
1978

Balance of payments: current account

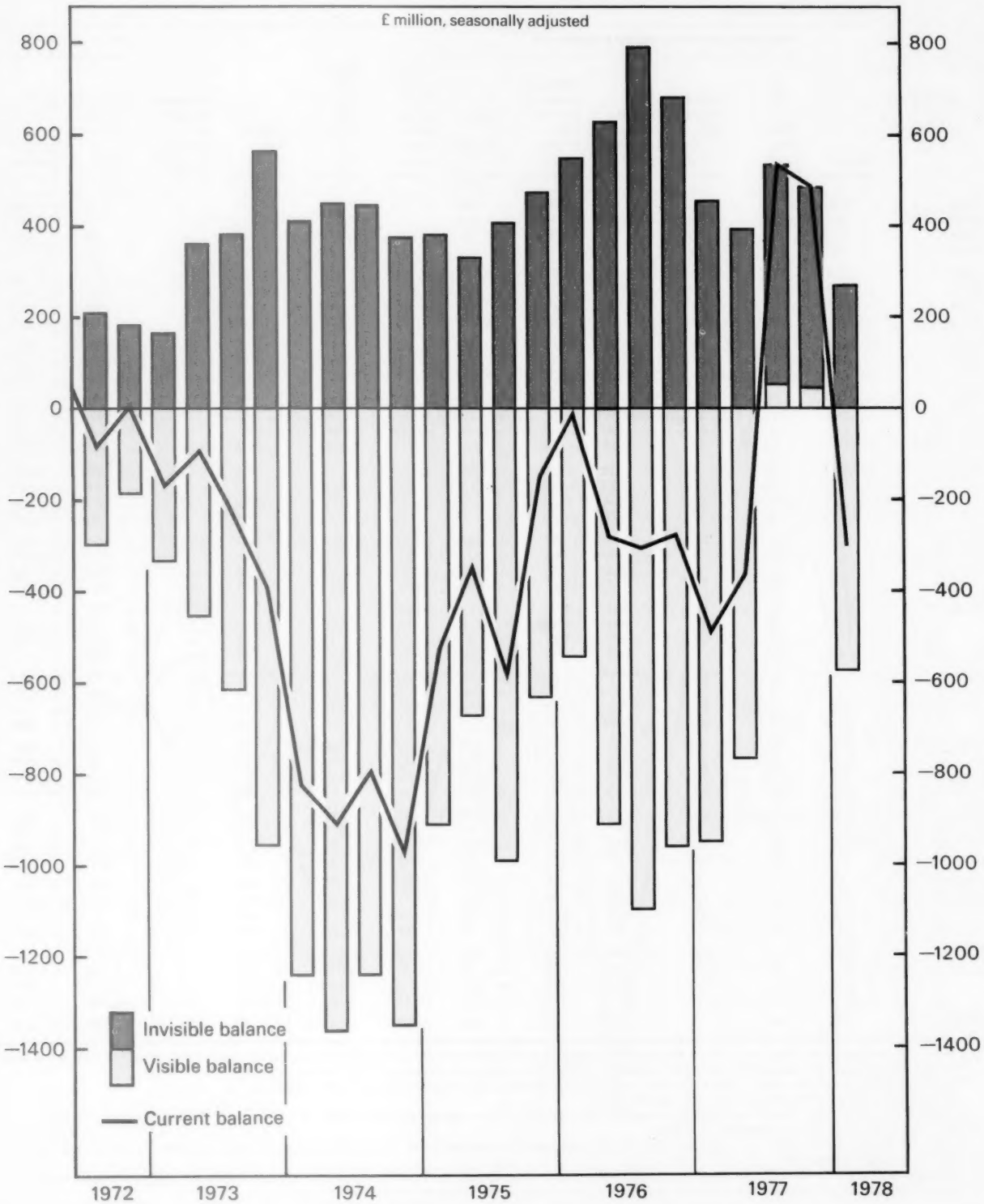
Seasonally adjusted

£ million

	Visible trade[1]			Invisibles			
	Exports (f.o.b.) §	Imports (f.o.b.) §	Total	Credits	Debits	Balance	Current balance
1967	5,241	5,796	− 555	3,244	2,989	+ 255	− 300
1968	6,433	7,100	− 667	3,794	3,414	+ 380	− 287
1969	7,269	7,425	− 156	4,295	3,699	+ 596	+ 440
1970	8,121	8,146	− 25	4,983	4,248	+ 735	+ 710
1971	9,060	8,781	+ 279	5,531	4,736	+ 795	+1,074
1972	9,450	10,151	− 701	6,081	5,254	+ 827	+ 126
1973	12,115	14,469	−2,354	8,305	6,834	+1,471	− 883
1974	16,539	21,734	−5,195	10,041	8,361	+1,680	−3,515
1975	19,462	22,667	−3,205	11,138	9,550	+1,588	−1,617
1976	25,422	28,932	−3,510	14,315	11,664	+2,651	− 859
1977	32,176	33,788	−1,612	15,801	14,024	+1,777	− 165
1972 *1*	2,258	2,356	− 98	1,459	1,249	+ 210	+ 112
2	2,343	2,465	− 122	1,493	1,267	+ 226	+ 104
3	2,115	2,413	− 298	1,552	1,345	+ 207	− 91
4	2,734	2,917	− 183	1,577	1,393	+ 184	+ 1
1973 *1*	2,754	3,088	− 334	1,745	1,579	+ 166	− 168
2	2,901	3,353	− 452	2,037	1,677	+ 360	− 92
3	3,147	3,760	− 613	2,108	1,727	+ 381	− 232
4	3,313	4,268	− 955	2,415	1,851	+ 564	− 391
1974 *1*	3,619	4,860	−1,241	2,430	2,019	+ 411	− 830
2	4,152	5,514	−1,362	2,484	2,035	+ 449	− 913
3	4,393	5,633	−1,240	2,529	2,084	+ 445	− 795
4	4,375	5,727	−1,352	2,598	2,223	+ 375	− 977
1975 *1*	4,674	5,586	− 912	2,662	2,281	+ 381	− 531
2	4,601	5,271	− 670	2,707	2,379	+ 328	− 342
3	4,844	5,836	− 992	2,785	2,380	+ 405	− 587
4	5,343	5,974	− 631	2,984	2,510	+ 474	− 157
1976 *1*	5,655	6,198	− 543	3,217	2,669	+ 548	+ 5
2	6,171	7,080	− 909	3,431	2,803	+ 628	− 281
3	6,499	7,596	−1,097	3,752	2,959	+ 793	− 304
4	7,097	8,058	− 961	3,915	3,233	+ 682	− 279
1977 *1*	7,502	8,449	− 947	3,790	3,336	+ 454	− 493
2	7,930	8,694	− 764	3,895	3,496	+ 399	− 365
3	8,540	8,486	+ 54	4,058	3,575	+ 483	+ 537
4	8,204	8,159	+ 45	4,058	3,617	+ 441	+ 486
1978 *1*	8,441	9,015	− 574	4,173	3,904	+ 269	− 305
2	8,787	8,926	− 139				
1977 *A*	2,591	2,759	− 168	..	..		..
M	2,590	2,869	− 279	..	..	+ 399	..
J	2,749	3,066	− 317	..	..		..
J	2,793	2,955	− 162	..	..		..
A	2,851	2,690	+ 161	..	..	+ 483	..
S	2,896	2,841	+ 55	..	..		..
O	2,756	2,703	+ 53	..	..		..
N	2,668	2,600	+ 68	..	..	+ 441	..
D	2,780	2,856	− 76	..	..		..
1978 *J*	2,623	2,961	− 338	..	..		..
F	2,989	2,946	+ 43	..	..	+ 269	..
M	2,829	3,108	− 279	..	..		..
A	2,995†	2,808†	+ 187†	..	..	+ 120[2]	+ 307†
M	2,872	3,090	− 218	..	..	+ 120[2]	− 98
J	2,920	3,028	− 108	..	..	+ 120[2]	+ 12
J	3,045	3,195	− 150			+ 120[2]	− 30
A							
S							

[1] The quarterly and annual figures are consistent with the latest quarterly balance of payments article. The monthly figures, which may incorporate subsequent revisions are as published by the Department of Trade.

[2] These figures are projections and are subject to revision as the relevant statistical information becomes available


£ million, seasonally adjusted
800
600
400
200
0
−200
−400
−600
−800
−1000
−1200
−1400
Invisible balance
Visible balance
Current balance
1972
1973
1974
1975
1976
1977
1978

Analysis of capital transactions and official financing[1]

£ million

Not seasonally adjusted

	Current balance	Investment and other capital transactions: Official long-term capital	Overseas investment in UK public sector[2]	Private sector investment (net)	Overseas currency borrowing or lending (net) by UK banks[2]	Change in external sterling liabilities	Trade credit[3] and other short-term transactions	Balancing item and other capital transactions[4]	Balance for official financing[5]	Official financing: Allocation of SDR and gold subscription to IMF	Drawings on (+)/additions to (−) official reserves[6]	Other transactions (net)[7]
1967	− 300	− 59	+ 54	− 96	+ 36	− 286	−146	+126	− 671	—	+ 115	+ 556
1968	− 287	+ 16	+ 16	− 160	− 15	− 308	−305	−367	−1,410	—	+ 114	+1,296
1969	+ 440	− 99	− 56	− 6	− 38	+ 261	−227	+412	+ 687	—	− 44	− 643
1970	+ 710	−205	− 10	+ 49	+472	+ 459	−193	+ 5	+1,287	+133	− 125	−1,295
1971	+1,074	−274	+107	+ 216	+471	+1,422	−126	+256	+3,146	+125	−1,536	−1,735
1972	+ 126	−255	+120	− 610	+471	+ 196	−610	−703	−1,265	+124	+ 692	+ 449
1973	− 883	−254	+175	− 196	+525	+ 154	−355	+ 63	− 771	—	− 228	+ 999
1974	−3,515	−276	+252	+1,129	−294	+1,558	−685	+185	−1,646	—	− 105	+1,751
1975	−1,617	−288	+ 43	+ 336	+235	− 67	− 56	− 51	−1,465	—	+ 655	+ 810
1976	− 859	−158	+203	− 311	−106	−1,152	−1,605	+360	−3,628	—	+ 853	+2,775
1977	+ 165	−283	+2,183	+ 861	+320	+1,452	−176	+2,839	+7,361	—	−9,588	+2,227
1969 *1*	− 15	− 29	− 31	− 3	+ 14	+ 124	− 27	+239	+ 272	—	− 20	− 252
2	+ 155	− 11	+ 23	− 7	− 21	+ 50	− 99	− 28	+ 62	—	+ 11	− 73
3	+ 146	+ 29	− 65	+ 38	− 7	− 60	− 27	−134	− 80	—	+ 4	+ 76
4	+ 154	− 88	+ 17	− 34	− 24	+ 147	− 74	+335	+ 433	—	− 39	− 394
1970 *1*	+ 238	− 48	+ 3	+ 36	+125	+ 283	+ 66	+212	+ 915	+171	− 76	−1,010
2	+ 160	− 38	− 3	+ 123	+123	+ 158	−136	−160	+ 227	—	− 34	− 193
3	+ 79	− 20	− 23	− 84	− 24	+ 3	− 13	−120	− 202	—	+ 52	+ 150
4	+ 233	− 99	+ 13	− 26	+248	+ 15	−110	+ 73	+ 347	− 38	− 67	− 242
1971 *1*	+ 63	− 46	+ 70	+ 132	+ 84	+ 285	+ 70	+264	+ 922	+125	− 204	− 843
2	+ 350	− 44	+ 7	+ 44	+148	+ 277	− 97	− 82	+ 603	—	− 126	− 477
3	+ 379	− 34	+ 5	+ 54	+ 28	+ 337	+ 88	−189	+ 668	—	− 576	− 92
4	+ 282	−150	+ 25	− 14	+211	+ 523	−187	+263	+ 953	—	− 630	− 323
1972 *1*	− 216	− 42	+ 65	− 191	+114	+ 211	−164	+ 80	+ 57	+124	− 191	+ 10
2	+ 231	− 39	+ 22	− 194	−132	− 138	−375	−420	−1,045	—	+ 46	+ 999
3	− 137	− 17	+ 24	− 77	+199	− 92	− 47	+ 68	− 79	—	+ 639	− 560
4	+ 48	−157	+ 9	− 148	+290	+ 215	− 24	−431	− 198	—	+ 198	—
1973 *1*	− 329	− 55	+ 44	− 17	+ 1	+ 170	− 63	+276	+ 27	—	− 72	+ 45
2	− 2	− 31	+ 20	+ 30	+152	+ 166	+ 18	−254	+ 99	—	− 380	+ 281
3	− 220	− 27	+ 21	− 51	+ 36	− 415	−200	+238	− 618	—	+ 254	+ 364
4	− 332	−141	+ 90	− 158	+336	+ 233	−110	−197	− 279	—	− 30	+ 309
1974 *1*	− 901	− 52	+ 32	+ 564	− 61	+ 179	−150	+ 50	− 339	—	+ 33	+ 306
2	− 890	− 42	+107	+ 299	+ 56	+ 386	− 92	−143	− 319	—	− 116	+ 435
3	− 821	− 15	+ 30	+ 356	−346	+ 616	−109	+289	—	—	− 189	+ 189
4	− 903	−167	+ 83	− 90	+ 57	+ 377	−334	− 11	− 988	—	+ 167	+ 821
1975 *1*	− 627	− 73	+ 66	− 43	− 80	+ 247	− 32	+216	− 326	—	− 142	+ 468
2	− 362	− 39	—	− 337	+772	− 17	−264	−325	− 572	—	+ 410	+ 162
3	− 580	− 26	− 52	+ 566	− 15	− 379	+183	+ 90	− 213	—	+ 170	+ 43
4	− 48	−150	+ 29	+ 150	−442	+ 82	+ 57	− 32	− 354	—	+ 217	+ 137
1976 *1*	− 48	− 37	+ 9	+ 130	+ 94	− 75	−698	− 53	− 678	—	− 178	+ 856
2	− 275	− 26	+ 13	− 241	− 86	− 932	−574	+166	−1,955	—	+ 354	+1,601
3	− 255	− 10	+ 58	− 109	−272	− 137	−248	−111	− 862	—	+ 61	+ 801
4	− 281	− 85	+123	− 91	+158	− 8	− 85	+136	− 133	—	+ 616	− 483
1977 *1*	− 523	− 22	+498	+ 364	+421	+ 389	+103	+683	+1,913	—	−3,197	+1,284
2	− 351	− 16	+922	+ 159	−706	− 48	− 65	+1,013	+ 908	—	−1,158	+ 250
3	+ 531	− 17	+289	+ 340	+189	+ 397	− 95	+974	+2,608	—	−3,227	+ 619
4	+ 508	−228	+474	− 2	+416	+ 714	−119	+169	+1,932	—	−2,006	+ 74
1978 *1*	− 416	− 47	− 3	+ 297	+ 87	+ 101	−402	+556	+ 173	—	+ 46	− 219

[1] More comprehensive analyses are given in the appendix tables to the balance of payments articles in the March, June, September and December issues
[2] Excluding public sector borrowing under the exchange cover scheme which is included under official financing.
[3] Excluding trade credit between 'related' firms; after deducting advance and progress payments to suppliers.
[4] Capital transfers and EEA loss on forward commitments.
[5] Balance of current and capital transactions, including unidentified transactions covered by official financing other than that relating to IMF gold subscriptions and the allocation of SDRs.
[6] From 23 August 1971, valued in sterling at market-related rates of exchange. From July 1972, includes transactions affecting the United Kingdom reserve position in the IMF.
[7] Includes net transactions with overseas monetary authorities and other foreign currency borrowing by HM Government and by the public sector under the exchange cover scheme; in 1966 and 1967 includes the transfer from dollar portfolio to reserves.

£ million, unadjusted
2500
2000
1500
1000
500
0
−500
−1000
−1500
−2000
Balance for official financing
Current balance
1972
1973
1974
1975
1976
1977
1978

Money stock

£ million: amounts outstanding

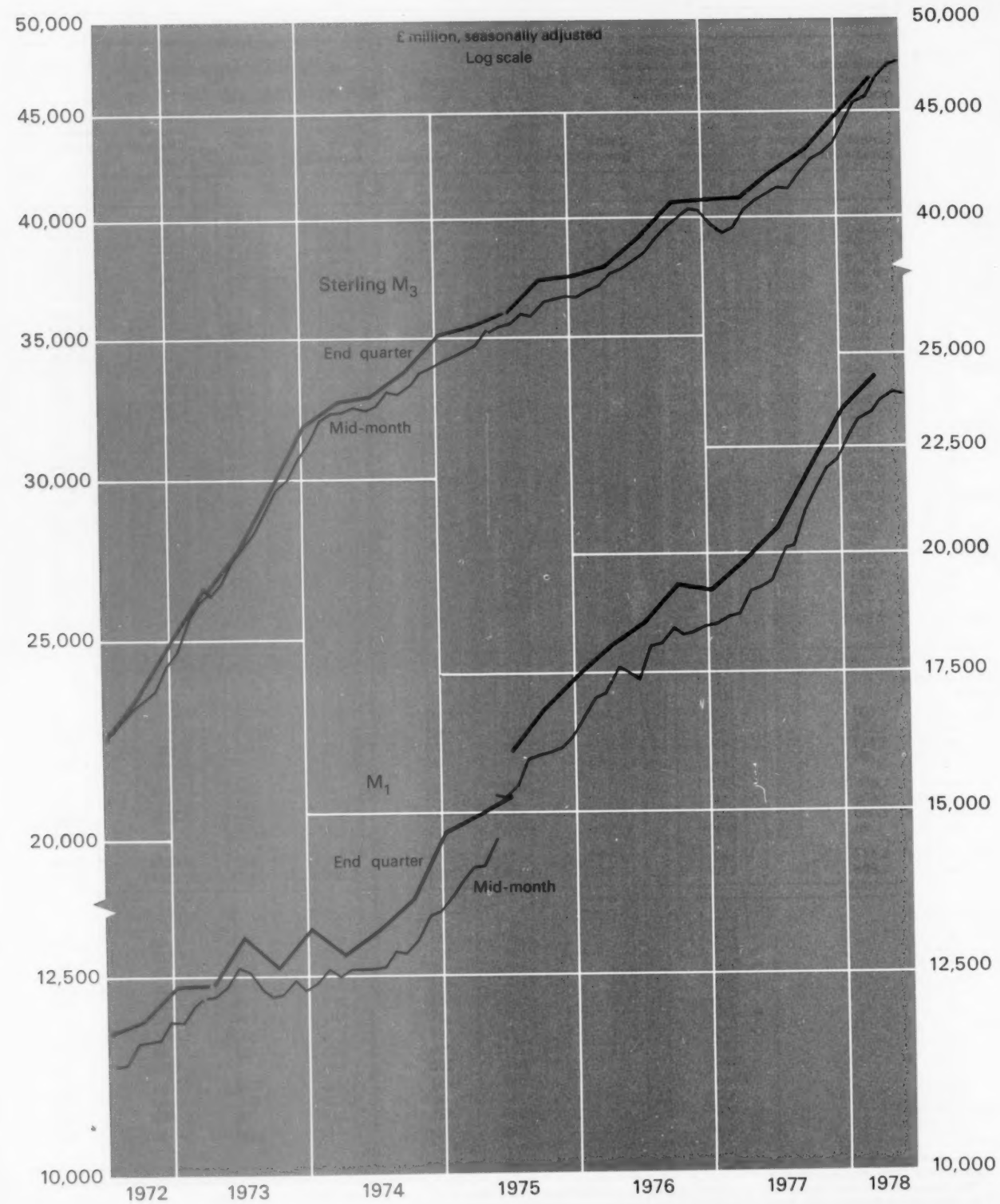
	M_1			Sterling M_3			M_3			Velocity of circulation[1]		
	Seasonally adjusted	Changes (seasonally adjusted)	*Percentage change*	Seasonally adjusted	Changes (seasonally adjusted)	*Percentage change*	Seasonally adjusted §	Changes (seasonally adjusted)	*Percentage change*	M_1	Sterling M_3	M_3
At end period												
1972 *1*[2]	11,190	407	+3·8	20,620	1,005	+5·1	21,150	1,104	+5·5	5·569	3·001	2·932
	11,240			21,030			21,560					
2	11,690	457	+4·1	22,490	1,472	+7·0	23,100	1,555	+7·2	5·483	2·899	2·825
3	11,830	133	+1·1	23,430	937	+4·2	24,080	976	+4·2	5·440	2·787	2·712
4	12,330	507	+4·3	24,930	1,500	+6·4	25,730	1,651	+6·9	5·551	2·773	2·692
1973 *1*[2]	12,340	− 10	−0·1	26,300	1,368	+5·5	27,300	1,565	+6·1	5·860	2·824	2·726
	12,340			26,210			27,310					
2	13,110	772	+6·3	27,550	1,349	+5·1	28,620	1,322	+4·8	5·637	2·666	2·565
3	12,540	−562	−4·3	29,490	1,936	+7·0	30,810	2,184	+7·6	5·797	2·607	2·502
4	13,140	610	+4·9	31,700	2,206	+7·5	33,130	2,318	+7·5	5·914	2·482	2·375
1974 *1*	12,760	−359	−2·7	32,480	790	+2·5	34,260	1,131	+3·4	5·841	2·357	2·245
2	13,100	342	+2·7	32,670	186	+0·6	34,850	593	+1·7	6·247	2·480	2·338
3	13,500	389	+3·0	33,500	825	+2·5	36,000	1,145	+3·3	6·611	2·658	2·482
4	14,580	1,065	+7·9	34,970	1,454	+4·3	37,370	1,352	+3·8	6·362	2·609	2·435
1975 *1*	14,890	293	+2·0	35,200	219	+0·6	37,720	340	+0·9	6·493	2·727	2·548
2[3]	15,260	364	+2·4	35,910	712	+2·0	38,260	544	+1·4	6·677	2·866	2·682
	15,990			35,890			38,250					
3	16,790	793	+5·0	37,080	1,192	+3·3	39,880	1,629	+4·3	6·591	2·927	2·734
4[4]	17,350	565	+3·4	37,270	207	+0·6	40,240	389	+1·0	6·570	3·017	2·800
1976 *1*	17,960	614	+3·5	37,700	462	+1·2	40,850	634	+1·6	6·660	3·137	2·900
2	18,400	439	+2·4	38,880	1,178	+3·1	42,440	1,593	+3·9	6·636	3·151	2·897
3	19,220	821	+4·5	40,450	1,586	+4·1	44,490	2,063	+4·9	6·706	3·180	2·902
4	19,140	− 78	−0·4	40,580	149	+0·4	44,550	71	+0·2	6·815	3·226	2·936
1977 *1*	19,750	610	+3·2	40,640	76	+0·2	44,910	384	+0·9	6·808	3·260	2·960
2	20,490	741	+3·8	41,940	1,308	+3·2	46,610	1,704	+3·8	6·805	3·316	2·992
3	21,860	1,373	+6·7	42,860	917	+2·2	47,280	665	+1·4	6·811	3·402	3·072
4	23,330	1,466	+6·7	44,660	1,793	+4·2	48,930	1,645	+3·5	6·495	3·353	3·051
1978 *1*	24,250	999	+4·3	46,520	1,950	+4·4	51,040	2,207	+4·5	6·325	3·301†	3·010
2												
At mid-month												
1977 *J*	18,400	51	+0·3	39,670	−475	−1·2	43,400	− 403	−0·9	..	..	..
F	18,550	173	+0·9	39,460	−171	−0·4	43,330	− 26	−0·1	..	..	..
M	18,580	46	+0·2	39,560	128	+0·3	43,400	90	+0·2	..	..	..
A	19,200	640	+3·4	40,330	795	+2·0	44,530	1,159	+2·7	..	..	..
M	19 350	161	+0·8	40,660	353	+0·9	44,920	412	+0·9	..	..	..
J	19,640	295	+1·5	40,960	309	+0·8	45,190	280	+0·6	..	..	..
J	20,050	426	+2·2	41,320	358	+0·9	45,470	290	+0·6	..	..	..
A	20,100	59	+0·3	41,290	− 1	—	45,450	3	—	..	..	..
S	20,890	817	+4·1	41,990	730	+1·8	46,200	782	+1·7	..	..	..
O	21,470	594	+2·8	42,550	595	+1·4	46,530	358	+0·8	..	..	..
N	21,780	325	+1·5	42,840	296	+0·7	46,560	42	+0·1	..	..	..
D	22,010	233	+1·1	43,250	413	+1·0	47,050	491	+1·1	..	..	..
1978 *J*	22,620	617	+2·8	44,280	1,036	+2·4	47,940	891	+1·9	..	..	..
F[5]	23,100†	475†	+2·1	45,330†	1,039†	+2·3†	49,120†	1,123†	+2·3†	..	..	..
M	23,240	142	+0·6†	45,620	283	+0·6	49,720	595	+1·2	..	..	..
A	23,610	369	+1·6	46,760	1,151	+2·5	51,410	1,692	+3·4	..	..	..
M	23,820	213	+0·9	47,160	403	+0·9	52,170	762	+1·5	..	..	..
J	23,720	−94	−0·4	47,310	144	+0·3	52,330	163	+0·3	..	..	..
J	24,140	415	+1·7	47,830	520	+1·1	52,680	342	+0·7			
A												
S												

[1] Ratio of GNP at current market prices seasonally adjusted expressed at an annual rate to the centred quarterly average of M_1/sterling M_3/M_3 seasonally adjusted.

[2] The breaks in the series at end-March 1972 and end-March 1973 show, in each case, the effects of changes in contributors.

[3] At mid-May 1975 new statistical returns were introduced. The first line of figures for end-June 1975, includes a number of estimates to provide reasonable consistency with earlier dates. [4] The amounts outstanding at end-December 1975, are shown after the exclusion of one contributor to the series, but the effect on the figures is very small. The changes have been adjusted to exclude the effect of the reduction in the number of contributors.

[5] From mid-February 1978 the coverage of UK holders of dollar certificates of deposit has been somewhat expanded: the effect of this has been excluded from the change in M_3.


£ million, seasonally adjusted
Log scale
Sterling M3
End quarter
Mid-month
M1
End quarter
Mid-month
50,000
45,000
40,000
35,000
30,000
25,000
20,000
12,500
10,000
22,500
17,500
15,000
1972
1973
1974
1975
1976
1977
1978

Domestic credit expansion and money stock

Seasonally adjusted[1]

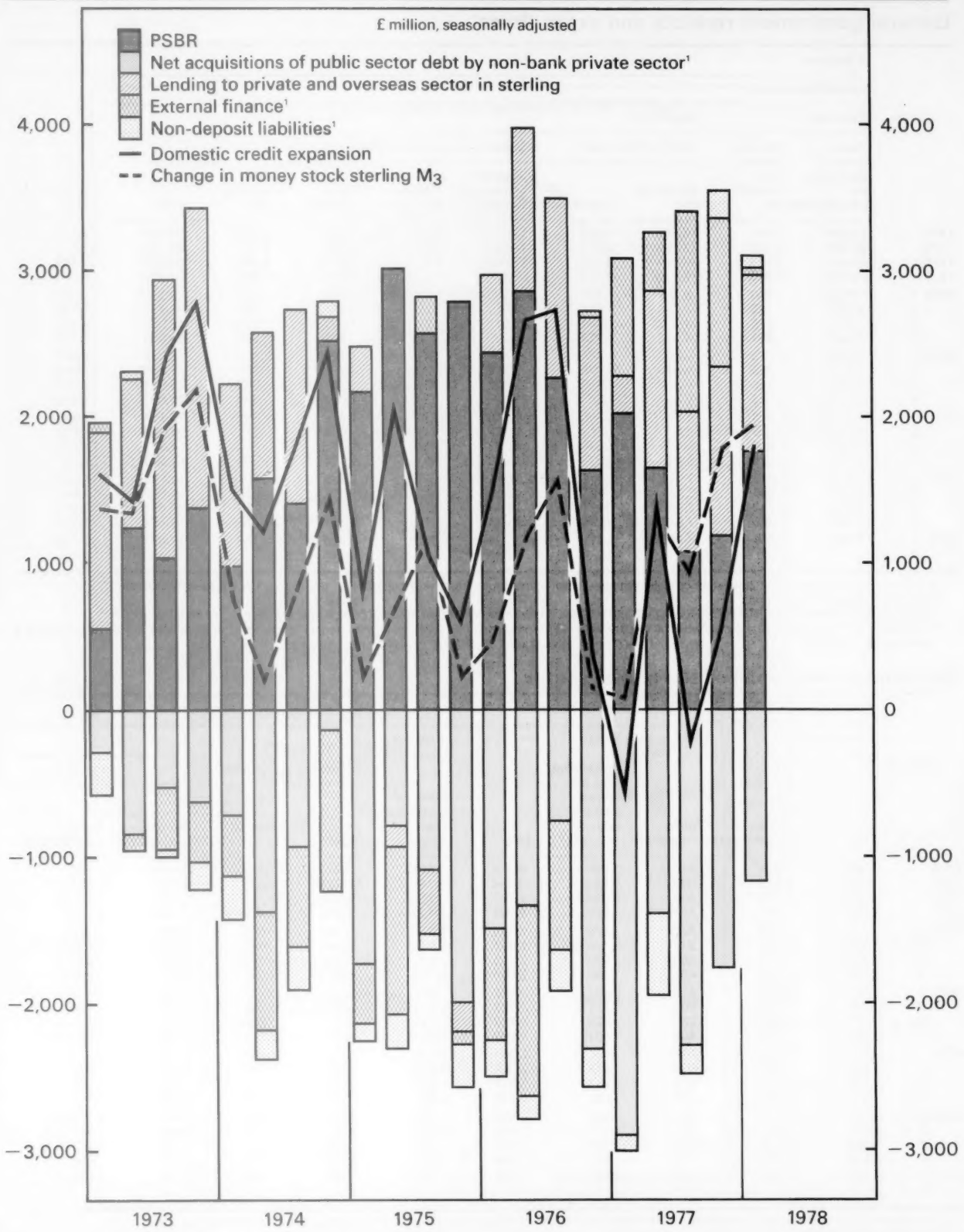
£ million

	Public sector borrowing requirement		Net acquisition of public sector debt by the non-bank private sector		Sterling lending to the private sector[2]	Bank lending in sterling to overseas	Domestic credit expansion	External and foreign currency finance	Non-deposit liabilities (net)	Money stock sterling M_3
	Central government	Other public sector	Other public sector	Central government						
	1	2	3	4	5	6	7	8	9	10
1972	1,596	438	230	776	5,510	136	6,674	1,095	652	4,927
1973	2,321	1,874	889	1,401	5,972	189	8,066	879	485	6,702
1974	3,491	2,883	2,312	852	3,435	289	6,934	2,997	682	3,255
1975	8,376	2,145	258	5,346	— 384	— 65	4,468	1,378	760	2,330
1976	6,786	2,403	411	5,453	3,463	650	7,433	2,906	967	3,565
1977	4,463	1,461	500	7,827	3,208	374	1,179	—3,591	673	4,097
1973 *1*	391	163	157	132	1,460	—124	1,601	— 63	296	1,368
2	1,008	224	315	529	933	90	1,411	108	— 46	1,349
3	205	830	186	348	739	168	2,408	429	43	1,936
4	717	657	231	392	1,997	55	2,803	405	192	2,206
1974 *1*	458	517	605	107	1,134	105	1,502	421	291	790
2	620	956	734	639	950	45	1,198	812	200	186
3	831	575	455	481	1,305	21	1,796	668	303	825
4	1,582	835	518	— 375	46	118	2,438	1,096	— 112	1,454
1975 *1*	1,259	894	68	1,657	448	—124	752	411	122	219
2	2,390	630	234	557	— 291	148	2,086	1,141	233	712
3	2,615	— 46	— 142	1,233	— 434	2	1,046	— 251	105	1,192
4	2,112	667	98	1,899	— 107	— 91	584	77	300	207
1976 *1*	2,019	425	53	1,436	176	345	1,476	762	252	462
2	2,099	757	211	1,105	852	266	2,658	1,308	172	1,178
3	1,808	455	103	653	1,030	201	2,738	875	277	1,586
4	860	766	44	2,259	1,215	—162	376	— 39	266	149
1977 *1*	1,509	506	521	2,379	352	— 92	— 625	— 809	108	76
2	1,524	126	214	1,167	1,021	183	1,473	— 399	564	1,308
3	253	817	— 48	2,342	802	162	— 260	—1,367	190	917
4	1,177	12	— 187	1,939	1,030	121	588	—1,016	— 189	1,793
1978 *1*	1,538†	223†	— 75†	1,235†	614	593	1,808	— 51	— 91	1,950
2										
Three months ended										
1976 Jan. 21	2,107		743	2,368	— 187	— 37	258	107	73	78
April 21	1,925		253	563	481	461	2,557	1,130	331	1,096
July 21	1,428		548	1,012	1,010	154	2,128	1,014	367	747
Oct. 20	1,799		516	1,095	1,199	99	2,518	717	176	1,625
1977 Jan. 19	1,478		438	2,751	883	—188	— 140	— 305	114	51
April 20	1,659		14	1,225	— 34	— 34	380	— 588	216	752
July 20	1,069		247	1,694	969	158	749	— 820	549	1,020
Oct. 19	88		676	2,304	1,259	208	— 73	—1,523	126	1,324
1978 Jan. 18	1,577		— 39	1,719	726	225	770	— 697	—278	1,745
April 19	1,869		410	1,047	1,106†	625	2,963†	276	214†	2,473†
Month ended										
1977 July 20			— 703		195	55	— 453	— 877	66	358
Aug. 17			— 694		425	107	— 162	— 289	128	— 1
Sept. 21			— 460		395	— 28	— 93	— 851	28	730
Oct. 19			— 386		439	129	182	— 383	— 30	595
Nov. 16			87		226	42	355	— 173	232	296
Dec. 14			— 239		308	92	161	— 144	—108	413
1978 Jan. 18			— 29		192	91	254	— 380†	—402	1,036
Feb. 15			367		287†	298	952	— 152	65	1,039†
March 15			— 180		560	205	585	— 7	309†	283
April 19			1,045		259	122	1,426	435	—160	1,151
May 17			350†		742	36	1,128	615	110	403
June 21			— 360		544	131	315	58	113	144
July 19			— 429		568	— 25	114	— 384	— 22	520

Relationship between columns 7 = 1 + 2 − 3 − 4 + 5 + 6; 10 = 7 − 8 − 9 (The figures combined in the bracket are column 2 *less* column 3).

[1] The seasonally adjusted figures do not always add to the calendar year total which is the sum of unadjusted quarterly figures.

[2] Banking sector lending *plus* Bank of England Issue Department holdings of commercial bills.



[1] Increases are shown as (—), decreases are shown as (+)

General government receipts and expenditure[1]

£ million

	General government									
	Receipts[2]		Expenditure							
			Goods and services		Current and capital transfers					
	Taxes, national insurance, etc. contributions	Trading income, rent, interest, etc.	Consumption	Investment	Current grants and subsidies	Capital transfers	Debt interest	Net lending, etc.[3]	Total	Public expenditure[4]
1974	29,874	3,631	16,591	4,405	11,202	1,093	3,559	2,429	39,279	36,126
1975	38,358	4,356	22,908	5,014	14,420	1,199	4,146	3,787	51,474	47,613
1976	44,567	5,304	26,514	5,520	17,029	1,417	5,369	2,465	58,314	53,933
1977	50,975	5,962	29,178	4,825	19,569	1,586	6,470	301	61,929	56,779
1974 *1*	7,580	930	3,787	1,328	2,587	283	985	546	9,516	8,610
2	6,835	782	3,794	816	2,467	255	648	433	8,413	7,736
3	7,568	978	4,272	1,141	2,913	273	1,032	908	10,539	9,655
4	7,891	941	4,738	1,120	3,235	282	894	542	10,811	10,125
1975 *1*	9,546	1,113	5,450	1,365	3,351	375	1,121	1,282	12,944	11,844
2	8,970	995	5,420	1,106	3,580	203	786	777	11,872	11,058
3	9,761	1,165	5,858	1,188	3,625	298	1,227	865	13,061	12,029
4	10,081	1,083	6,180	1,355	3,864	323	1,012	863	13,597	12,682
1976 *1*	11,247	1,378	6,367	1,706	4,116	384	1,514	1,031	15,118	13,803
2	10,773	1,216	6,570	1,213	4,251	306	996	493	13,829	12,916
3	10,883	1,405	6,695	1,304	4,223	323	1,615	757	14,917	13,727
4	11,664	1,305	6,882	1,297	4,439	404	1,244	184	14,450	13,487
1977 *1*	13,111	1,538	7,019	1,595	4,771	509	1,836	446	16,176	14,820
2	12,450	1,386	7,237	976	4,850	363	1,317	−185	14,558	13,501
3	12,646	1,712	7,395	1,117	4,870	341	1,784	116	15,623	14,010
4	12,768	1,326	7,527	1,137	5,078	373	1,533	− 76	15,572	14,448
1978 *1*	14,540	1,700	7,903	1,411	5,709	665	2,060	146	17,894	16,348
2										

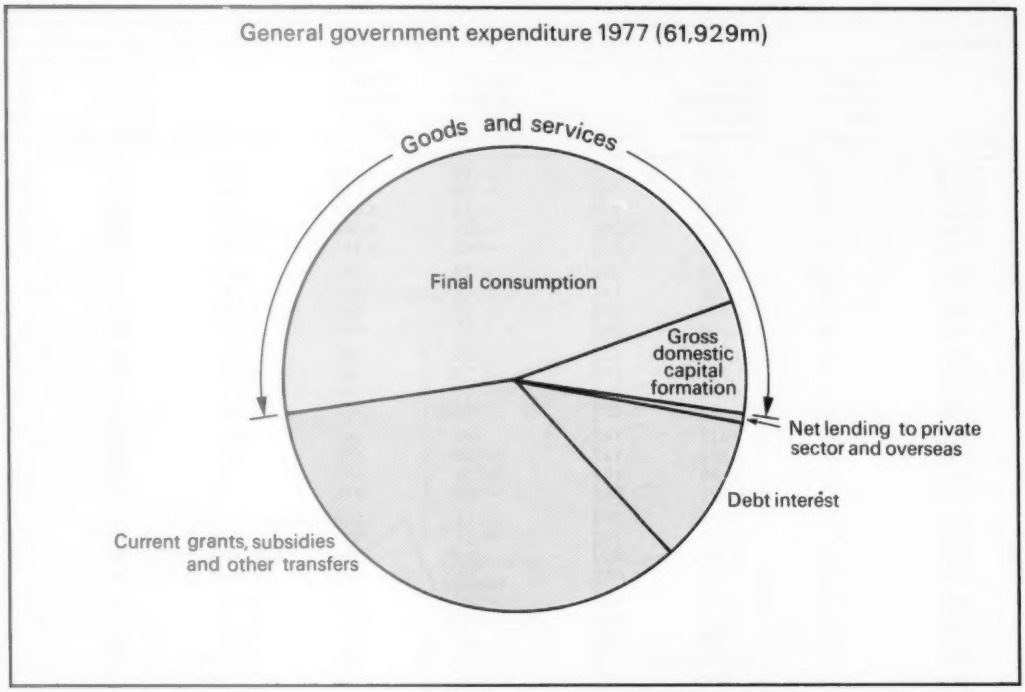
[1] An article describing the new presentation of government income and expenditure was published in the March 1977 issue of *Economic Trends*.
[2] Excluding financial transactions.
[3] Net lending to public corporations, private sector and overseas; cash expenditure on company securities, etc. (net).
[4] As defined in the public expenditure White Paper (Cmnd. 7049). A reconciliation with the total of general government expenditure is shown in Table 2·4 of *Financial Statistics*.

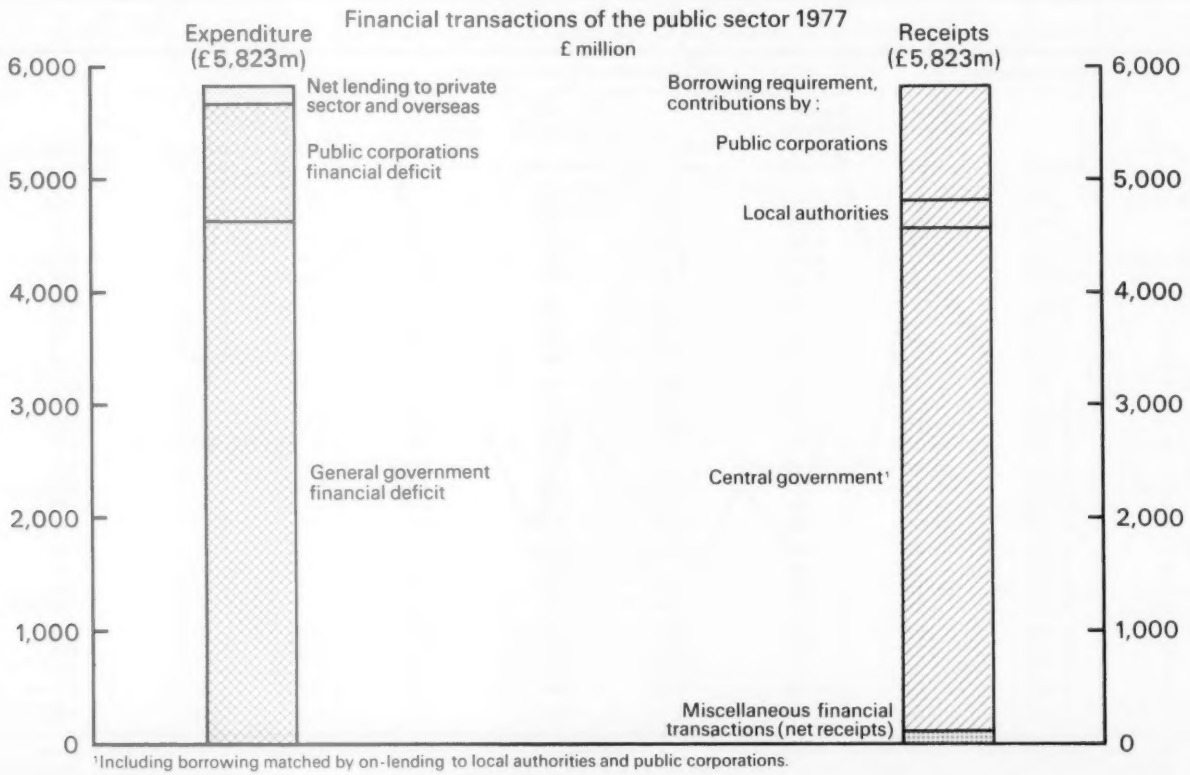
Financial transactions of the public sector

£ million

	Financial deficit[1]				Receipts			
						Borrowing requirement		
							Contributions by:	
	Total	General government[2]	Public corporations	Net lending etc., to private sector and overseas[3]	Total	Financial transactions (net receipts)	Total	Central government[4]	Local authorities	Public corporations
1974	4,898	3,345	1,553	1,867	6,765	393	6,372	3,491	2,124	757
1975	7,920	4,973	2,947	1,834	9,754	−767	10,521	8,376	1,654	491
1976	8,414	5,978	2,436	1,343	9,757	303	9,188	6,786	1,130	1,272
1977	5,801	4,700	1,101	120	5,921	123	5,924	4,463	230	1,231
1974 *1*	774	454	320	475	1,249	1,311	−62	−609	452	95
2	629	357	272	378	1,007	−874	1,881	985	780	116
3	1,664	1,104	560	649	2,313	717	1,596	858	452	286
4	1,831	1,430	401	365	2,196	−761	2,957	2,257	441	260
1975 *1*	1,910	1,000	910	492	2,402	879	1,523	987	528	8
2	1,722	1,127	595	311	2,033	−1,064	3,097	2,356	612	129
3	2,301	1,267	1,034	429	2,730	239	2,491	2,288	210	− 7
4	1,987	1,579	408	602	2,589	−821	3,410	2,745	304	361
1976 *1*	2,249	1,462	787	431	2,680	1,048	1,632	1,414	196	22
2	1,950	1,347	603	419	2,369	−595	2,964	2,204	281	479
3	2,704	1,872	832	297	3,001	685	2,296	1,655	287	354
4	1,511	1,297	214	196	1,707	−589	2,296	1,513	366	417
1977 *1*	1,368	1,081	287	308	1,676	649	1,027	572	472	− 17
2	1,109	907	202	− 11	1,098	−815	1,952	1,778	−230	444
3	1,822	1,149	673	30	1,852	815	1,037	274	281	482
4	1,502	1,563	− 61	−207	1,295	−613	1,908	1,879	−293	322
1978 *1*	1,407	1,506	− 99	−265	1,142	518	624	534	715	−625
2										

[1] The excess of current and capital expenditure over receipts; corresponds to a negative figure of 'net acquisition of financial assets'.
[2] Top table, columns 3 to 7, *less* 1 and 2. [3] Including cash expenditure on company securities (net).
[4] Including borrowing matched by on-lending to local authorities and public corporations.


General government expenditure 1977 (61,929m)
Goods and services
Final consumption
Gross domestic capital formation
Net lending to private sector and overseas
Debt interest
Current grants, subsidies and other transfers



[1]Including borrowing matched by on-lending to local authorities and public corporations.

Sector financial accounts

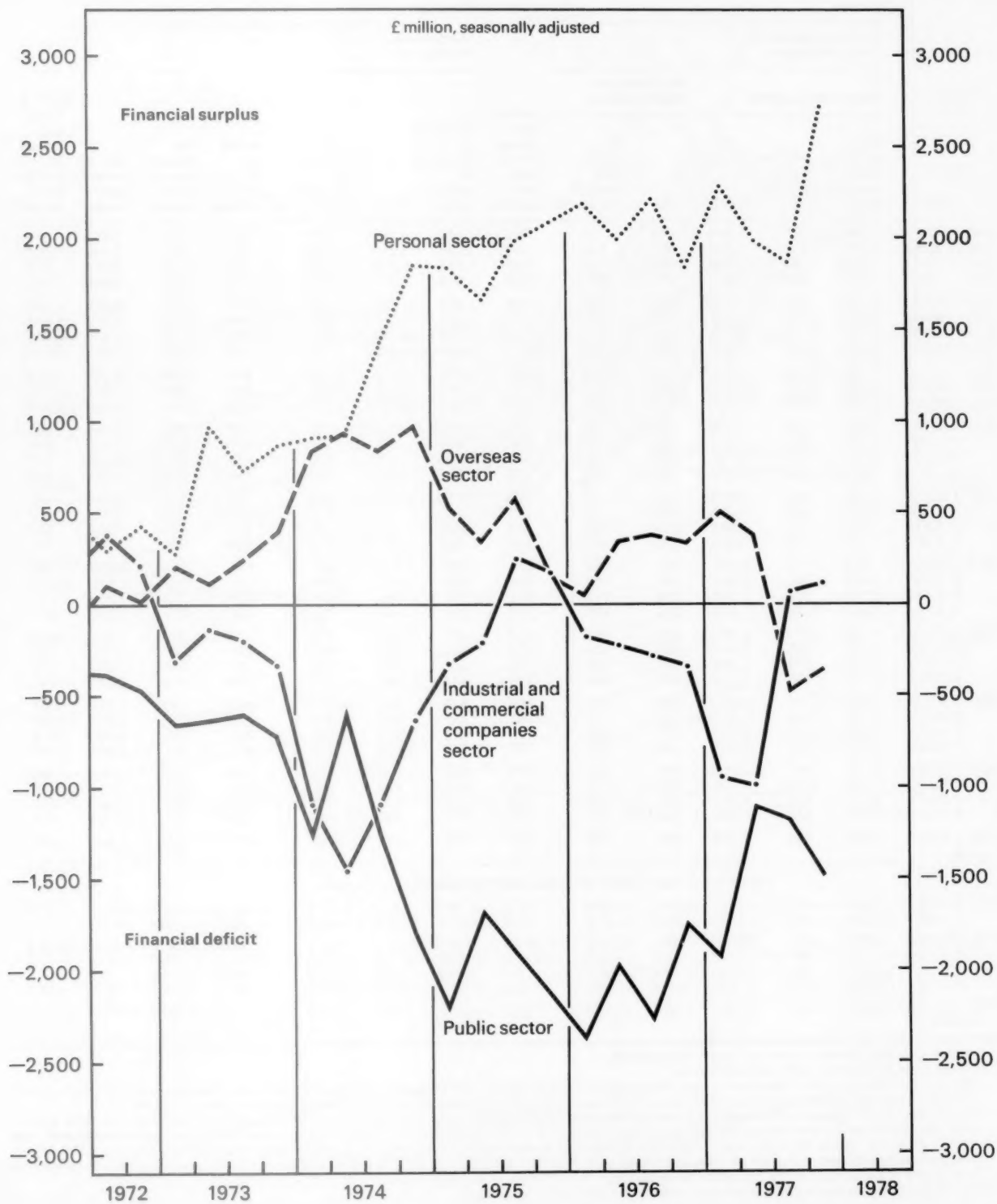
Seasonally adjusted

£ million

	Public sector[1]			Financial companies and institutions			Industrial and commercial companies		
	Saving[2]	Capital transfers (net receipts)	Gross domestic capital formation[3]	Saving[2]	Capital transfers (net receipts)	Gross domestic capital formation[3]	Saving[2]	Capital transfers (net receipts)	Gross domestic capital formation[3]
1973	3,278	— 5	5,892	882	— 76	1,298	7,314	347	8,635
1974	2,683	— 18	7,563	783	— 66	14,32	7,541	333	12,167
1975	2,040	— 82	9,878	679	— 19	1,661	8,169	403	9,201
1976	2,842	—193	11,113	1,269	—102	2,048	11,647	359	12,790
1977	4,164	—187	9,778	1,174	—142	2,462	11,547	246	13,361
1973 *1*	809	— 18	1,446	252	— 18	267	1,577	82	1,977
2	771	— 23	1,390	178	— 9	322	1,738	82	1,948
3	896	1	1,502	209	— 18	336	1,978	102	2,279
4	802	35	1,554	243	— 31	373	2,021	81	2,431
1974 *1*	423	8	1,716	223	— 15	368	1,902	86	3,087
2	1,159	— 23	1,712	173	— 18	349	1,871	87	3,419
3	721	— 25	1,953	150	— 17	340	1,915	78	3,091
4	380	22	2,182	237	— 16	375	1,853	82	2,570
1975 *1*	244	— 65	2,427	140	57	360	1,931	96	2,353
2	636	36	2,313	137	— 28	402	1,920	82	2,202
3	561	— 20	2,435	181	— 29	490	1,976	113	2,336
4	599	— 33	2,703	221	— 19	409	2,342	112	2,310
1976 *1*	485	— 35	2,854	253	— 11	458	2,315	94	2,524
2	836	— 52	2,729	190	— 17	480	2,928	97	3,186
3	526	— 47	2,748	387	— 19	568	3,100	80	3,406
4	995	— 59	2,782	439	— 55	542	3,304	88	3,674
1977 *1*	983	— 88	2,712	406	— 30	525	3,001	85	3,956
2	1,252	— 70	2,280	284	— 36	503	2,962	85	3,848
3	1,265	— 14	2,398	328	— 41	751	2,880	30	2,717
4	664	— 15	2,388	156	— 35	683	2,704	46	2,840
1978 *1*	690	—235	2,240	225	61	745	2,620	120	3,260

	Personal sector			Net acquisition of financial assets[4]					
	Saving[2]	Capital transfers (net receipts)	Gross domestic capital formation[3]	Public sector	Financial companies and institutions	Industrial and commercial companies	Personal sector	Overseas sector[5]	Residual error[6]
1973	6,079	—325	2,921	—2,619	— 492	— 974	2,833	942	310
1974	8,642	—324	3,195	—4,898	— 715	—4,293	5,123	3,590	1,193
1975	11,544	—302	3,666	—7,920	—1,001	— 629	7,576	1,617	357
1976	12,869	— 64	4,574	—8,414	— 881	— 802	8,231	859	1,007
1977	14,047	83	5,285	—5,801	—1,454	—1,568	8,845	—165	143
1973 *1*	1,062	— 84	702	— 655	— 33	— 318	276	208	522
2	1,713	— 69	675	— 642	— 153	— 128	969	104	—150
3	1,580	— 86	770	— 605	— 145	— 199	724	243	— 18
4	1,724	— 86	774	— 717	— 161	— 329	864	387	— 44
1974 *1*	1,828	— 79	844	—1,285	— 160	—1,099	905	830	809
2	1,831	— 75	819	— 576	— 194	—1,461	937	942	352
3	2,259	— 76	754	—1,257	— 207	—1,098	1,429	835	298
4	2,724	— 94	778	—1,780	— 154	— 635	1,852	983	—266
1975 *1*	2,800	— 88	860	—2,248	— 163	— 326	1,852	531	354
2	2,624	— 90	874	—1,641	— 293	— 200	1,660	342	132
3	2,978	— 64	934	—1,894	— 338	— 247	1,980	587	— 88
4	3,142	— 60	998	—2,137	— 207	144	2,084	157	— 41
1976 *1*	3,264	— 48	1,056	—2,404	— 216	— 133	2,160	— 5	598
2	3,070	— 28	1,050	—1,945	— 307	— 161	1,992	281	140
3	3,402	— 14	1,181	—2,269	— 200	— 226	2,207	304	184
4	3,133	26	1,287	—1,796	— 158	— 282	1,872	279	85
1977 *1*	3,459	33	1,232	—1,817	— 149	— 870	2,260	493	83
2	3,263	21	1,330	—1,098	— 255	— 801	1,954	365	—165
3	3,141	25	1,297	—1,147	— 488	193	1,869	—537	110
4	4,184	4	1,426	—1,739	— 562	— 90	2,762	—486	115
1978 *1*	3,704	54	1,442	—1,785	— 459	— 520	2,316	305	143

[1] Excluding financial transactions in writing-off debt. [2] Before providing for depreciation stock appreciation and addition to reserves.
[3] Comprises gross domestic fixed capital formation and increase in value of stocks and work in progress. [4] This balance is equal to saving *plus* capital transfers *less* gross domestic fixed capital formation *less* increase in value of stocks and work in progress. [5] Equals, apart from the change in sign, the current balance of payments accounts, *plus* capital transfers. [6] The residual error in the national income accounts


£ million, seasonally adjusted
3,000
2,500
2,000
1,500
1,000
500
0
−500
−1,000
−1,500
−2,000
−2,500
−3,000
Financial surplus
Financial deficit
Personal sector
Overseas sector
Industrial and commercial companies sector
Public sector
1972
1973
1974
1975
1976
1977
1978

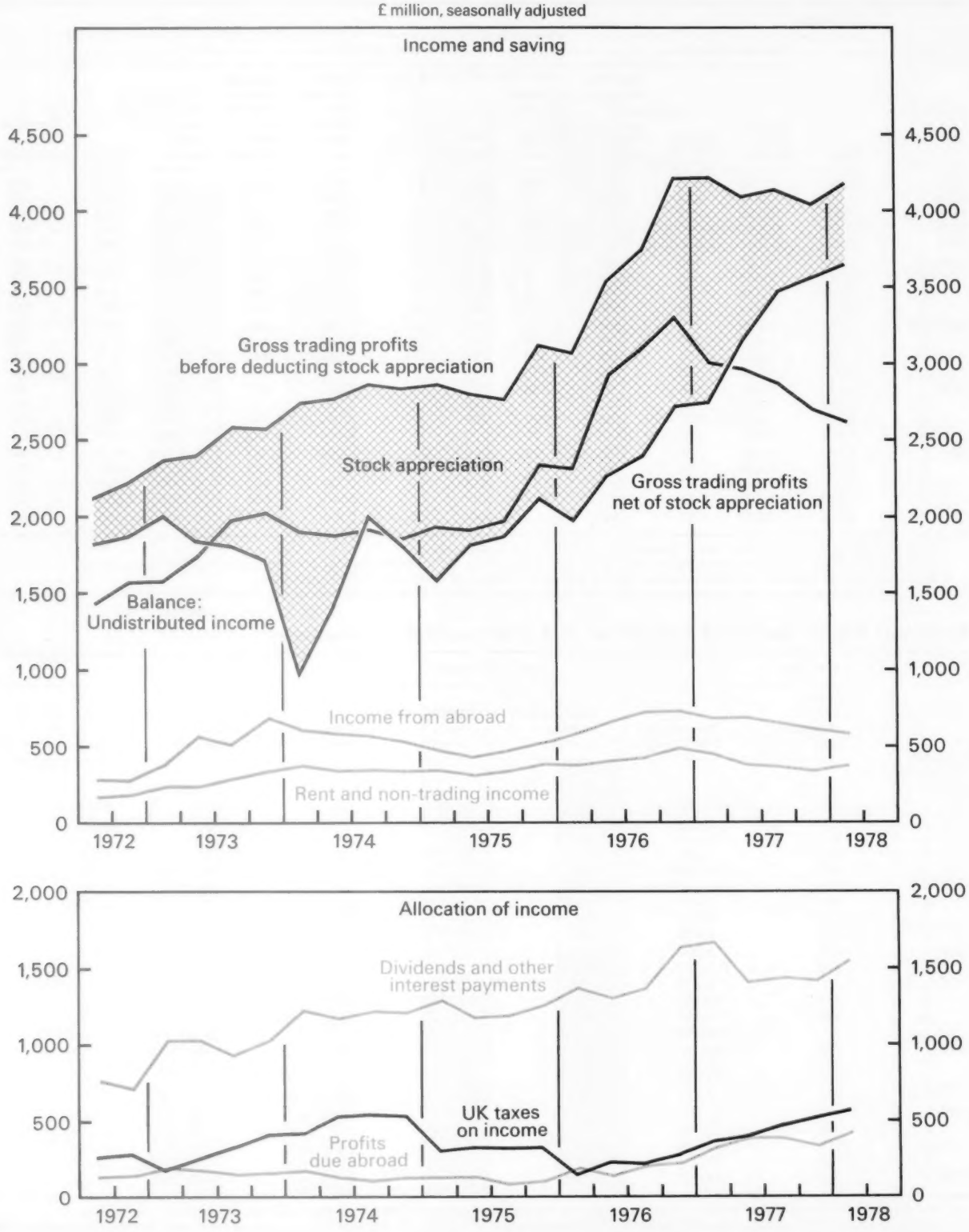
Appropriation account of industrial and commercial companies

£ million Seasonally adjusted

	Income							Allocation of income						
	Income arising in the United Kingdom							Dividends and interest, etc.						
	Gross trading profits			Rent and non-trading income										
	Total	After deducting stock appreciation	Stock appreciation	Total[1]	Total	*of which* from financial companies[2]	Income from abroad (net of taxes paid abroad)	Payments of dividends on ordinary shares[3]	Other	*of which* to financial companies[2]	Profits due abroad (net of UK tax)	UK taxes on income (payments)[4]	Balance undistributed income[5]	Taxes paid abroad on income from abroad[2]
1967	6,003	4,817	147	4,964	377	96	662	1,463	941	548	206	941	2,452	*514*
1968	6,854	5,170	472	5,642	457	139	755	1,434	1,067	656	311	919	3,123	*705*
1969	7,604	5,568	587	6,155	504	165	945	1,554	1,219	756	259	1,013	3,559	*819*
1970	7,983	5,553	893	6,446	513	151	1,024	1,378	1,301	799	322	1,297	3,685	*1,041*
1971	8,733	6,343	842	7,185	524	135	1,024	1,530	1,320	792	397	1,104	4,382	*1,334*
1972	9,928	7,102	1,062	8,164	650	196	1,114	1,524	1,510	969	549	1,082	5,263	*1,592*
1973	13,132	7,372	2,543	9,915	1,059	501	2,158	1,638	2,365	1,806	665	1,156	7,308	*2,359*
1974	14,874	6,190	5,015	11,205	1,350	695	2,319	1,469	3,340	2,716	524	2,022	7,519	*4,012*
1975	14,796	7,362	4,184	11,546	1,356	619	1,894	1,608	3,309	2,674	447	1,263	8,169	*3,414*
1976	18,908	9,330	5,223	14,553	1,664	802	2,691	1,895	3,772	3,120	744	850	11,647	*4,077*
1977	20,615	12,928	3,556	16,484	1,521	636	2,610	2,219	3,694	3,048	1,423	1,732	11,547	*3,816*
1972 *1*	2,203	1,621	187	1,808	139	30	256	437	323	196	127	297	1,019	*360*
2	2,438	1,793	219	2,012	142	34	284	461	347	221	135	252	1,243	*357*
3	2,584	1,818	302	2,120	175	60	289	352	406	270	141	255	1,430	*415*
4	2,703	1,870	354	2,224	194	72	285	274	434	282	146	278	1,571	*460*
1973 *1*	2,973	2,007	357	2,364	225	96	384	526	505	386	188	177	1,577	*484*
2	3,196	1,840	560	2,400	226	90	570	511	522	392	171	254	1,738	*484*
3	3,376	1,804	779	2,583	279	134	514	319	609	454	151	321	1,976	*614*
4	3,587	1,721	847	2,568	329	181	690	282	729	574	155	404	2,017	*777*
1974 *1*	3,697	963	1,773	2,736	351	192	610	432	792	647	170	410	1,893	*938*
2	3,692	1,403	1,358	2,761	333	170	598	355	811	657	126	529	1,871	*1,065*
3	3,773	2,005	858	2,863	338	172	572	357	855	691	103	549	1,909	*1,029*
4	3,712	1,819	1,026	2,845	328	161	539	325	882	721	125	534	1,846	*980*
1975 *1*	3,657	1,567	1,290	2,857	326	150	474	431	868	711	123	304	1,931	*886*
2	3,545	1,808	995	2,803	309	130	433	377	800	641	123	325	1,920	*852*
3	3,578	1,858	904	2,762	344	157	472	389	801	637	97	315	1,976	*976*
4	4,016	2,129	995	3,124	377	182	515	411	840	685	104	319	2,342	*700*
1976 *1*	4,026	1,955	1,116	3,071	359	157	596	523	839	672	199	150	2,315	*936*
2	4,590	2,258	1,285	3,543	395	178	652	445	858	697	138	221	2,928	*969*
3	4,873	2,396	1,341	3,737	417	200	719	414	946	776	201	212	3,100	*1,115*
4	5,419	2,721	1,481	4,202	493	267	724	513	1,129	975	206	267	3,304	*1,057*
1977 *1*	5,334	2,747	1,463	4,210	449	227	675	574	1,086	910	318	355	3,001	*982*
2	5,154	3,152	946	4,098	375	152	681	492	914	756	387	399	2,962	*998*
3	5,149	3,471	669	4,140	361	140	648	542	891	730	379	457	2,880	*951*
4	4,978	3,558	478	4,036	336	117	606	611	803	652	339	521	2,704	*885*
1978 *1*	5,132	3,646	536	4,182	360	134	590	733	808	644	415	556	2,620	*900*
2														
	Percentage change, quarter on corresponding quarter of previous year													
1976 *3*	*+36·2*	*+29·0*	*+48·3*	*+35·3*	*+21·2*	*+27·4*	*+52·3*	*+ 6·4*	*+18·1*	*+21·8*	*+107·2*	*— 32·7*	*+56·9*	*+14·3*
4	*+34·9*	*+27·8*	*+48·9*	*+34·5*	*+30·8*	*+46·7*	*+40·6*	*+24·8*	*+34·4*	*+42·3*	*+ 98·1*	*— 16·3*	*+41·1*	*+51·0*
1977 *1*	*+32·5*	*+40·5*	*+31·1*	*+37·1*	*+25·1*	*+44·6*	*+13·3*	*+ 9·8*	*+29·4*	*+35·4*	*+ 59·8*	*+136·7*	*+29·6*	*+ 4·9*
2	*+12·3*	*+39·6*	*—26·4*	*+15·7*	*— 5·1*	*—14·6*	*+ 4·4*	*+10·6*	*+ 6·5*	*+ 8·5*	*+180·4*	*+ 80·5*	*+ 1·2*	*+ 3·0*
3	*+ 5·7*	*+44·9*	*—50·1*	*+10·8*	*—13·4*	*—30·0*	*— 9·9*	*+30·9*	*— 5·8*	*— 5·9*	*+ 88·6*	*+115·6*	*— 7·1*	*—14·7*
4	*— 8·1*	*+30·8*	*—67·7*	*— 4·0*	*—31·8*	*—56·2*	*—16·3*	*+19·1*	*—28·9*	*—33·1*	*+ 64·6*	*+ 95·1*	*—18·2*	*—16·3*
1978 *1*	*— 3·8*	*+32·7*	*—63·4*	*— 0·7*	*—19·8*	*—41·0*	*—12·6*	*+27·7*	*—25·6*	*—29·2*	*+ 30·5*	*+ 56·6*	*—12·7*	*— 8·4*
2														

[1] Before providing for depreciation and stock appreciation.
[2] These items are included solely as memoranda.
[3] With the introduction of the imputation system of corporation tax from 6 April 1973 payments of dividends, previously shown gross of income tax, appear as actual payments, while the advance corporation tax in respect of those dividends is included in United Kingdom taxes on income.
[4] The residual of all companies payments and accruals of financial companies and institutions taxes on income. The former include payments of corporation tax (including advance corporation tax from 6 April 1973). Up to 5 April 1973 the balance of deductions of income tax from dividends over payments to the Inland Revenue is also deducted. In the first quarter of 1978 the amount of advance corporation tax included was £325 million. The seasonally adjusted series for all companies have been allocated between industrial and commercial companies and financial companies and institutions in proportion to the calendar year estimates of their accruals of taxes on income.
[5] Before providing for depreciation, stock appreciation and additions to reserves.

£ million, seasonally adjusted



Sources and uses of capital funds of industrial and commercial companies

£ million

	Sources of funds						Uses of funds					
	Total	Undistributed income[1]	Capital transfers	Bank borrowing[2], loans and mortgages	UK capital issues by listed companies (net)	Overseas[3]	Taxes on capital and capital transfers	Gross domestic fixed capital formation	Increase in value of stocks and work in progress	Acquisition of financial assets: Liquid assets[4]	Acquisition of financial assets: Other[5]	Unidentified items (residual)
1973	15,008	7,314	373	5,379	188	1,834	26	4,826	3,809	2,494	3,303	630
1974	15,088	7,519	364	4,656	62	2,416	31	6,048	6,119	39	2,588	192
1975	12,511	8,169	442	764	1,216	1,881	42	6,961	2,240	1,764	2,008	— 504
1976	18,329	11,647	401	2,837	828	2,039	42	7,744	5,064	1,792	4,533	— 896
1977	18,614	11,547	315	3,372	656	2,724	69	9,025	4,336	2,759	3,660	—1,235
1974 *1*	4,042	1,581	105	1,487	—	908	16	1,290	1,580	— 159	593	762
2	3,944	2,085	83	1,272	— 9	513	3	1,421	1,945	237	266	72
3	3,398	1,736	87	948	18	610	6	1,556	1,562	— 70	338	6
4	3,593	2,117	89	949	53	385	6	1,781	1,032	31	1,391	— 648
1975 *1*	3,182	1,898	119	831	53	281	22	1,554	569	285	376	376
2	2,689	1,913	82	70	344	280	6	1,617	495	— 388	1,110	— 152
3	2,637	1,819	123	— 478	399	774	7	1,940	445	1,398	— 454	— 699
4	4,003	2,539	118	380	420	546	7	1,850	731	469	976	— 29
1976 *1*	3,789	2,640	116	95	236	702	22	1,550	807	103	1,242	65
2	4,844	2,845	98	1,067	435	399	6	1,863	1,120	691	1,369	— 205
3	4,033	2,609	90	739	136	459	7	2,137	1,315	755	558	— 739
4	5,663	3,553	97	1,513	21	479	7	2,194	1,822	243	1,414	— 17
1977 *1*	5,009	3,159	109	794	33	914	29	1,854	1,747	11	624	744
2	4,706	2,844	90	766	341	665	8	2,336	1,369	459	1,041	— 507
3	4,071	2,564	53	596	182	676	19	2,334	522	984	958	— 746
4	4,828	2,980	63	1,216	100	469	13	2,501	698	1,305	1,037	— 726
1978 *1*	4,155	2,668	153	349	— 4	989	30	2,275	881	474	195	340

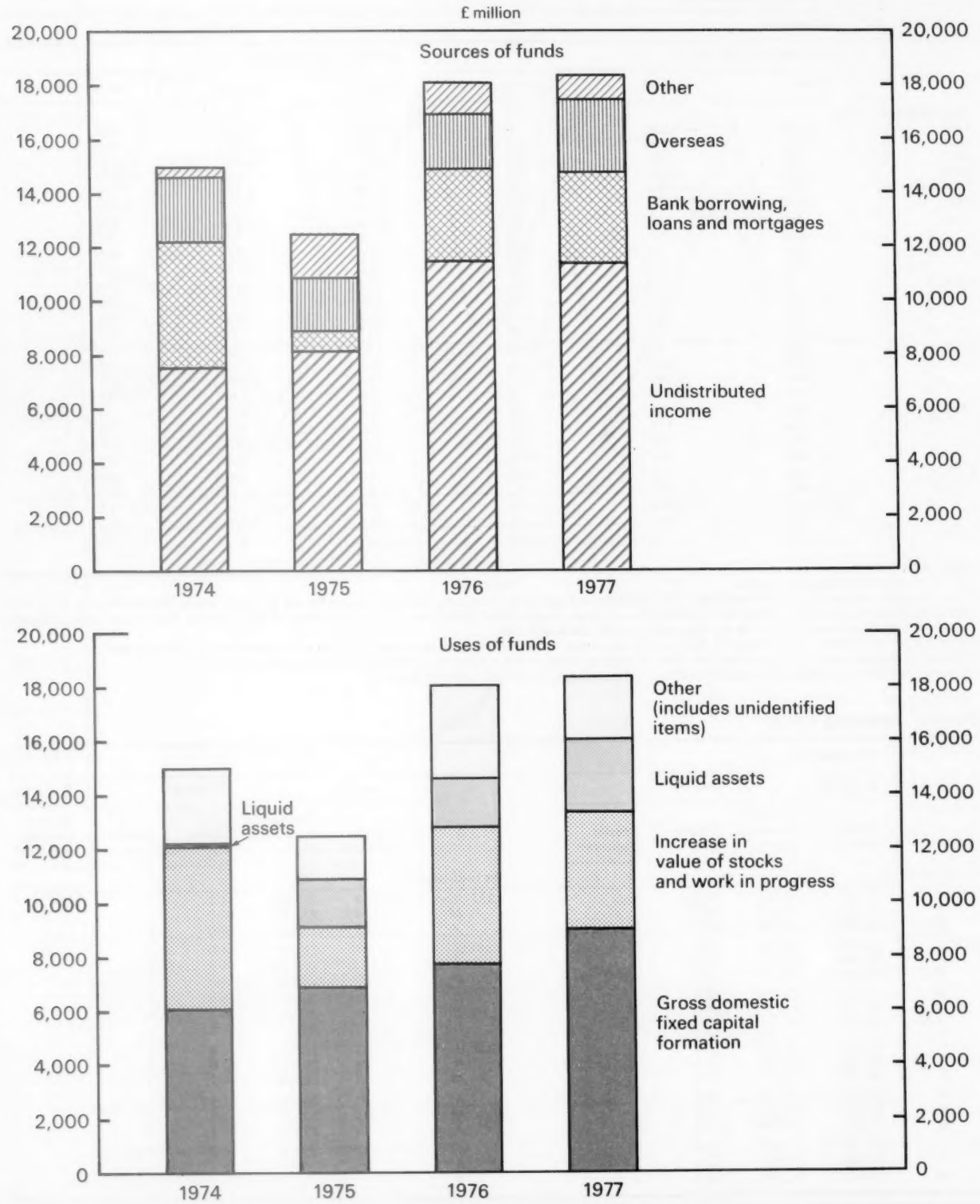
[1] Before providing for depreciation, stock appreciation and additions to reserves.
[2] After addition of 40 per cent of the excess of debit over credit transit items.
[3] Other than investments included in UK capital issues.
[4] Bank deposits are included after subtraction of 60 per cent of the excess of debit over credit transfer items.
[5] Including figures of large companies transactions in British government securities (for further information see *Financial Statistics Explanatory handbook).*

Selected liquid assets of industrial and commercial companies

£ million

Amounts outstanding at end:	Local authority temporary debt	Deposits with banking sector[1],[2]	Deposits with building societies	Deposits with finance houses[1]	Other identified[1],[3]	Total identified[1]	Bank advances[1],[4]
1973 *1*	395	7,230 / 7,225	183	182 / 180	88	8,078 / 8,071	10,551 / 10,649
2	472	7,202	200	205	87	8,166	11,370
3	488	8,487	175	242	85	9,477	12,561
4	483	9,126	160	217	85	10,071	14,421
1974 *1*	519	8,949	161	176	54	9,859	15,423
2	509	8,897	166	193	52	9,817	16,772
3	518	9,142	172	157	168	10,157	17,387
4	484	9,038	180	122	97	9,921	18,019
1975 *1*	424	9,336	181	163	58	10,162	18,316
2	415	9,269 / 9,473	183	173	115 / 112	10,155 / 10,356	19,049 / 17,489
3	434	10,409	184	159	385	11,571	17,562
4	459	10,767 / 10,757	185	136	355	11,902 / 11,892	17,679 / 17,727
1976 *1*	443	10,739	222	183	566	12,153	17 726
2	425	11,182	251	193	700	12,751	19,206
3	414	12,180	273	203	443	13,513	19,955
4	579	12,376	289	210	389	13,843	20,923
1977 *1*	477	12,378	304	201	360	13,720	21,255
2	388	12,715	336	224	397	14,060	21 955
3	317	13,284	363	220	736	14,920	22,065
4	229	14,298	401	214	645	15,787	22,448
1978 *1*	280	14,919	426	211	537	16,373	22,681

[1] The breaks in series result from further information regarding holdings by sector and changes to the banking and finance houses sectors.
[2] From 2nd quarter 1973 includes identified holdings of dollar certificates of deposit.
[3] Treasury bills, tax reserve certificates, tax deposit accounts, and certificates of tax deposits.
[4] Including refinanceable export and shipbuilding credits with effect from mid-May 1972.


£ million
Sources of funds
Other
Overseas
Bank borrowing, loans and mortgages
Undistributed income
Uses of funds
Other (includes unidentified items)
Liquid assets
Increase in value of stocks and work in progress
Gross domestic fixed capital formation
Liquid assets
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1974
1975
1976
1977

Bank lending[1] to UK residents

Seasonally adjusted[2]

£ million

	Lending to public sector			Lending to private sector		
	Total	Sterling	Other currencies[3]	Total	Sterling	Other currencies[3]
Transactions						
1972	−1,026	−1,030	4	6,434	5,511	923
1973	1,995	1,134	861	6,828	5,671	1,157
1974	701	− 370	1,071	4,671	3,734	937
1975	3,364	3,081	283	139	− 386	525
1976	271	− 163	434	3,515	3,137	378
1977	2,475	1,793	682	4,715	3,512	1,203
1973 *1*	362	319	43	1,523	1,234	289
2	498	261	237	1,072	1,021	51
3	331	− 12	343	2,190	1,780	410
4	647	409	238	2,200	1,793	407
1974 *1*	86	− 177	263	1,339	1,016	323
2	− 441	− 657	216	1,514	1,289	225
3	− 165	− 265	100	1,507	1,359	148
4	1,221	729	492	311	70	241
1975 *1*	204	− 94	298	139	180	− 41
2[5]	1,390	1,402	− 12	207	− 32	239
3	1,640	1,640	—	− 124	− 438	314
4[4]	130	133	− 3	− 83	− 96	13
1976 *1*	200	183	17	150	173	− 23
2	− 64	− 118	54	808	846	− 38
3	777	619	158	1,233	1,022	211
4	− 452	− 657	205	1,134	906	228
1977 *1*	388	− 115	503	1,146	586	560
2	250	250	—	1,262	1,105	157
3	1,093	844	249	843	779	64
4	747	817	− 70	1,461	1,039	422
1978 *1*	243	472	− 229	659	514	145
2						

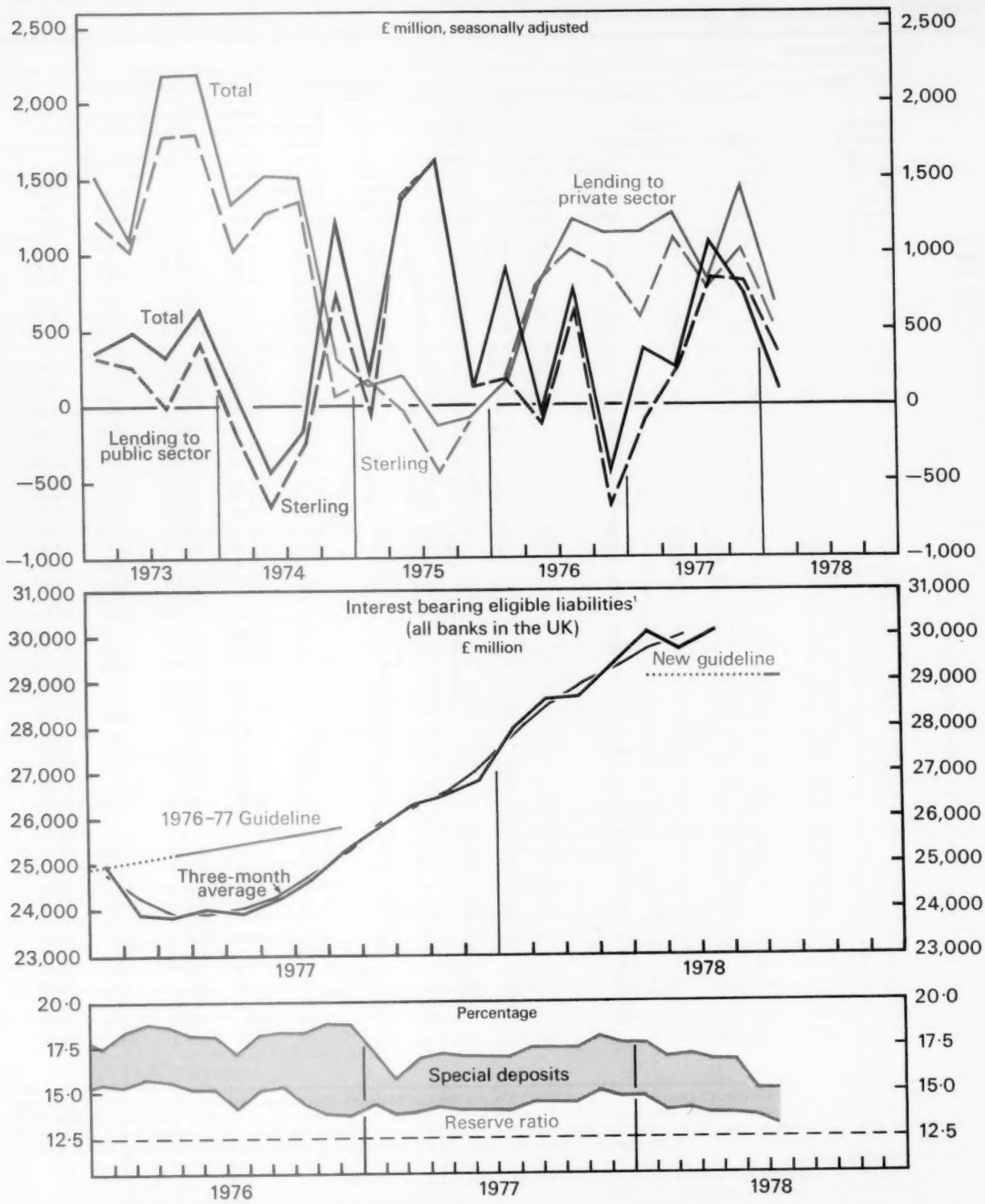
[1] UK banking sector: changes in assets.
[2] The seasonally adjusted quarterly figures do not necessarily add up to the (unadjusted) figures shown for the year as a whole. This is because, as well as allowing for purely seasonal factors, the adjustments attempt to remove other distortions (such as the effect of the particular days of the week on which a quarter begins and ends), which do not necessarily cancel out over a year.
[3] From the second quarter 1975 changes in foreign currency assets have been adjusted to exclude the effect of movements in exchange rates.
[4] Figures have been calculated to exclude the effect of small changes in the number of contributors to the banking statistics.
[5] Figures have been calculated to exclude the effects of the introduction of new statistical returns.

Banks' reserve ratio

Unadjusted

	£ million		Per cent			£ million		Per cent		£ million
	Eligible liabilities	*of which:* Interest bearing[1]	Reserve ratio	Special deposits[2]		Eligible liabilities	*of which:* Interest bearing	Reserve ratio	Special deposits[2]	Supplementary deposits[2]
At mid-month					**At mid-month**					
1975 *O*	33,367	22,986	15·7	3	1977 *A*	35,843	24,009	14·2	3	
N	33,451	23,033	15·2	3	*M*	35,824	23,940	14·0	3	1
D	33,345	22,764	15·1	3	*J*	36,278	24,221	14·0	3	—
1976 *J*	33,046	22,509	15·5	2	*J*	37,095	24,670	14·0	3	1
F	33,204	22,929	15·4	3	*A*	37,692	25,319	14·5	3	
M	33,106	22,551	15·8	3	*S*	38,795	25,803	14·5	3	
A	33,907	22,803	15·6	3	*O*	39,708†	26,320	14·5	3	
M	33,738	22,739	15·2	3	*N*	40,208	26,494†	15·1	3	
J	34,026	23,111	15·2	3	*D*	40,857	26,811	14·8	3	
J	34,987	23,761	14·2	3	1978 *J*	41,683	27,991	14·8	3	
A	35,184	23,955	15·1	3	*F*	42,229	28,622	14·0	3	
S	35,795	24,390	15·4	3	*M*	42,573	28,695	14·1	3	
O	36,622	25,215	14·4	4	*A*	43,880	29,395	13·9	3	
N	37,260	26,068	13·9	5	*M*	44,503	30,100	13·9	3	
D	36,877	25,424	13·8	5	*J*	44,369	29,732	13·8	1½	
1977 *J*	36,147	24,996	14·4	3	*J*	45,037	30,173	13·3	2	
F	34,834	23,916	13·8	2	*A*					
M	34,977	23,840	13·9	3	*S*					

[1] Banks in Northern Ireland were excluded up to the first figure for May 1975. [2] Not yet applicable to banks in Northern Ireland.



[1] Supplementary special deposits will have to be paid by banks and deposit-taking finance houses, according to growth in excess of the guideline, at rates of 5 per cent (up to 3 per cent excess), 25 per cent (over 3 and up to 5 per cent excess) and 50 per cent (above 5 per cent excess) of interest-bearing eligible liabilities.

Interest rates, security prices and yields

Percentage rate

		Last Friday							Last working day	Average of working days			
		Bank of England's minimum lending rate to the market[1]	Treasury bill yield[2]	Deposits with local authorities (3 months)[3]	London clearing banks: Base rate	London clearing banks: Deposit account: 7 days' notice[4]	Inter-bank (3 month rate)[5]	Sterling certificates of deposit (3 months)	Euro-dollar 3-month rate	Building Societies Association recommended rate on shares[6]	British government securities 2½% Consols yield	*Financial Times* index of industrial ordinary shares: 1 July 1935=100 — Price index	Dividend yield	Earnings yield[7]
1967		8	7·63	7¾ – 7⅞	8	6	8 1/16 – 8 3/16	..	6 5/16	4·25	6·69	355·0	5·36	6·69
1968		7	6·89	7¾	7	5	7 13/16 – 8	7⅞ – 7 15/16	7½	4·50	7·39	463·3	4·05	4·99
1969		8	7·80	9 – 9 1/16	8	6	9⅜ – 9½	9⅜ – 9¼	11 5/16	5·00	8·88	419·8	4·43	5·82
1970		7	6·93	7¼	7	5	7 1/8 – 7¼	7 3/16 – 7 5/16	7 7/16	5·00	9·16	361·0	4·75	6·54
1971		5	4·46	4½ – 4⅝	4½	2½	4⅝ – 4¾	4⅜ – 4¾	5¾	5·00	9·05	386·2	4·76	6·21
1972		9	8·48	8¾	7½	5½	8⅞ – 9 1/16	8 15/16 – 9 1/16	5 15/16	5·25	9·11	503·8	3·26	4·98
1973		13	12·82	16 –16⅛	13	9½	16 1/16 –16 5/16	15¾ –16	10⅞	7·50	10·85	435·6	4·12	..
1974		11½	11·30	13¼	12	9½	12 1/16 –12 3/16	12⅜ –12¾	10½	7·50	14·95	251·2	8·23	21·47
1975		11¼	10·93	11¼ –11⅜	11	7	11 1/16 –11 3/16	11 –11⅛	6 1/16	7·00	14·66	311·0	6·81	19·49
1976		14¼	13·98	14¾ –15	14	11	14⅛ –14⅝	14 1/16 –14⅛	5 1/16	7·80	14·25	368·0	5·96	17·61
1977		7		6¾	6¾–7½	3½–4½	6 9/16 – 6¾	6⅝ – 6 7/16	7⅛	6·00	12·32	452·3	5·42	16·50
1975	*J*	11	10·72	10½ –10⅝	9½	6¼	10⅜ –10 11/16	10½ –10⅝	7⅛	7·00	14·06	304·4	6·68	19·62
	A	11	10·66	10½	10	6½	10⅜ –10 9/16	10⅜ –10½	7⅜	7·00	14·12	298·3	6·94	19·91
	S	11	10·76	10⅝ –10⅞	10	6½	10½ –10 11/16	10⅝ –10¾	7 17/32	7·00	14·08	328·9	6·31	17·58
	O	12	11·74	11⅝ –11¾	11	7	11 9/16 –11⅝	11 7/16 –11½	6 13/16	7·00	14·90	341·9	6·14	16·88
	N	11½	11·30	11⅜ –11 7/16	11	7	11⅛ –11⅜	11 9/16 –11 5/16	7 1/16	7·00	14·79	367·9	5·76	16·02
	D	11¼	10·93	11¼ –11⅜	11	7	11 1/16 –11 3/16	11 –11⅛	6 1/16	7·00	14·86	365·8	5·74	15·98
1976	*J*	10	9·52	9⅞ – 9 15/16	10½	6½	9⅜ – 9 11/16	9 7/16 – 9½	5⅜	7·00	13·78	397·0	5·30	14·91
	F	9¼	8·80	9 – 9⅛	9½	5½	8¾ – 8⅞	8 11/16 – 8 13/16	5⅝	7·00	13·54	404·2	5·17	14·99
	M	9	8·60	8⅜ – 8¾	9½	5½	8 9/16 – 8 11/16	8 7/16 – 8 9/16	5 5/16	7·00	13·95	404·7	5·12	15·01
	A	10½	10·20	10⅛ –10¼	9½	5½	9 13/16 –10 1/16	9⅞ – 9 15/16	5 9/16	7·00	13·97	406·0	5·13	15·17
	M	11½	11·31	11¼ –11⅜	10½	6½	11¼ –11 11/16	11 5/16 –11 7/16	6⅝	6·50	13·72	406·6	5·26	15·19
	J	11½	11·30	11⅛ –11¼	10½	6½	11⅛ –11 7/16	11¼ –11⅜	6 1/16	6·50	14·01	378·6	5·69	16·14
	J	11½	11·17	11 3/16 –11¼	10½	6½	11 3/16 –11¼	11 3/16 –11¼	5 1/16	6·50	13·95	383·8	5·74	16·44
	A	11½	11·25	11⅛ –11 5/16	10½	6½	11⅛ –11 5/16	11 3/16 –11¼	5 1/16	6·50	14·11	368·1	6·03	17·55
	S	13	12·74	12¾ –12⅞	12	8½	12½ –12¾	12½ –12⅝	5⅝	6·50	14·47	344·0	6·52	19·23
	O	15	14·97	15¼ –15½	14	11	15⅛ –15⅜	15 3/16 –15¼	5 7/16	6·50	15·43	293·6	7·61	23·07
	N	14¾	14·54	15 –15¼	14	11	14¾ –14 15/16	14 9/16 –14 11/16	5 5/16	7·80	15·22	301·0	7·28	22·66
	D	14¼	13·98	14¾ –15	14	11	14⅛ –14⅜	14 1/16 –14⅛	5 1/16	7·80	14·82	328·6	6·67	20·91
1977	*J*	12¼	12·09	12⅜ –13 5/8†	13	9½	12⅛ –12⅜	12 –12 1/16	5⅛	7·80	13·67	374·7	6·01	18·69
	F	12	11·06	11⅝	11½	8	11 5/16 –11 7/16	11⅛ –11 3/16	5 3/16	7·80	13·47	393·8	5·83	18·77
	M	10½	9·57	9½ – 9⅝	9½	6½	9¾ – 9 15/16	9 9/16 – 9⅝	5 7/32	7·80	12·85	418·2	5·39	16·91
	A	8¼	7·64	8⅛	9	4½	7 15/16 – 8 1/16	7 13/16 – 7⅞	5 5/16	7·80	12·55	415·1	5·51	16·82
	M	8	7·57	7¾ – 7⅞	8½	4	7 11/16 – 7 15/16	7 11/16 – 7¾	6 1/16	7·00	12·41	459·7	5·08	15·54
	J	8	7·60	7⅞ – 8	8½	4	7¾ – 8	7¾ – 7 13/16	5 5/16	7·00	12·85	450·5	5·19	15·83
	J	8	7·44	7⅝ – 7¾	8½	4	7⅝ – 7 1/16	7 9/16 – 7 11/16	6¼	6·70	13·11	443·1	5·37	16·09
	A	7	6·52	6¾ – 6¾	8	4	6⅝ – 6¾	6⅝ – 6 11/16	6¾	6·70	12·56	478·6	5·23	15·23
	S	6	5·37	5 13/16 – 5⅞	7	3	5¾ – 5 15/16	5⅝ – 5 23/32	6 29/32	6·70	11·52	522·8	5·03	14·98
	O	5	4·53	4¾ – 5	6	3	4 3/16 – 5	4 3/16 – 4 5/16	7½	6·70	10·84	511·9	5·26	15·55
	N	7	6·53	6¾	6	3	6½ – 7⅛	6⅝ – 6 1/16	7 3/32	6·00	11·04	480·5	5·56	16·72
	D	7	6·39	6¾	6¾–7½	3½–4½	6 9/16 – 6¾	6¾ – 6 7/16	7⅛	6·00	10·90	481·6	5·56	16·83
1978	*J*	6½	5·85	6¼ – 6 5/16	6½	3	6 5/16 – 6½	6⅛ – 6¼	7 15/32	6·00	10·67	482·3	5·57	16·96
	F	6½	6·07	6⅜ – 6¾	6½	3	6⅜ – 6⅞	6⅜ – 6¾	7 3/16	5·50	11·21	457·9	5·85	17·74
	M	6½	6·02	6⅜ – 7	6½	3	6 13/16 – 7	6 11/16 – 6 13/16	7 1/16	5·50	11·18	454·9	5·94	17·51
	A	7½	7·12	8 – 8⅛	7½	4	8 3/16 – 8½	8⅛ – 8¼	7 23/32	5·50	11·65	460·9	5·85	17·25
	M	9	8·67	9¼	9	6	9 5/16 – 9 7/16	9 3/16 – 9¼	7 15/16	5·50	12·07	476·6	5·58	16·86
	J	10	9·49	9⅞ –10 1/16	10	6½–7	10 1/16 –10¼	9 15/16 –10 1/16	8 23/32	5·50	12·31	466·1	5·68	16·65
	J	10	9·33	10⅛ –10¼	10	6½–7	9 15/16 –10 3/16	9 15/16 – 9 15/16	8 17/32	6·70	12·20	472·2	5·52	17·06
	A													
	S													

[1] Previously known as Bank Rate. From 13 October 1972 to 24 May 1978, the Bank of England's minimum lending rate was normally set ½% higher than the average rate of discount for Treasury bills established at the weekly tender, rounded to the nearest ¼% above. With effect from 25 May 1978 the rate has been determined by administrative decision with changes normally being announced at 12.30 p.m. on Thursdays; a new rate becomes effective for lending by the bank, immediately. For changes in Bank Rate 1932–72 see *Supplement of Definitions and Explanatory Notes* to *Monthly Digest of Statistics (HMSO)*.

[2] Average discount rate expressed as the rate at which interest is earned during the life of the bills.

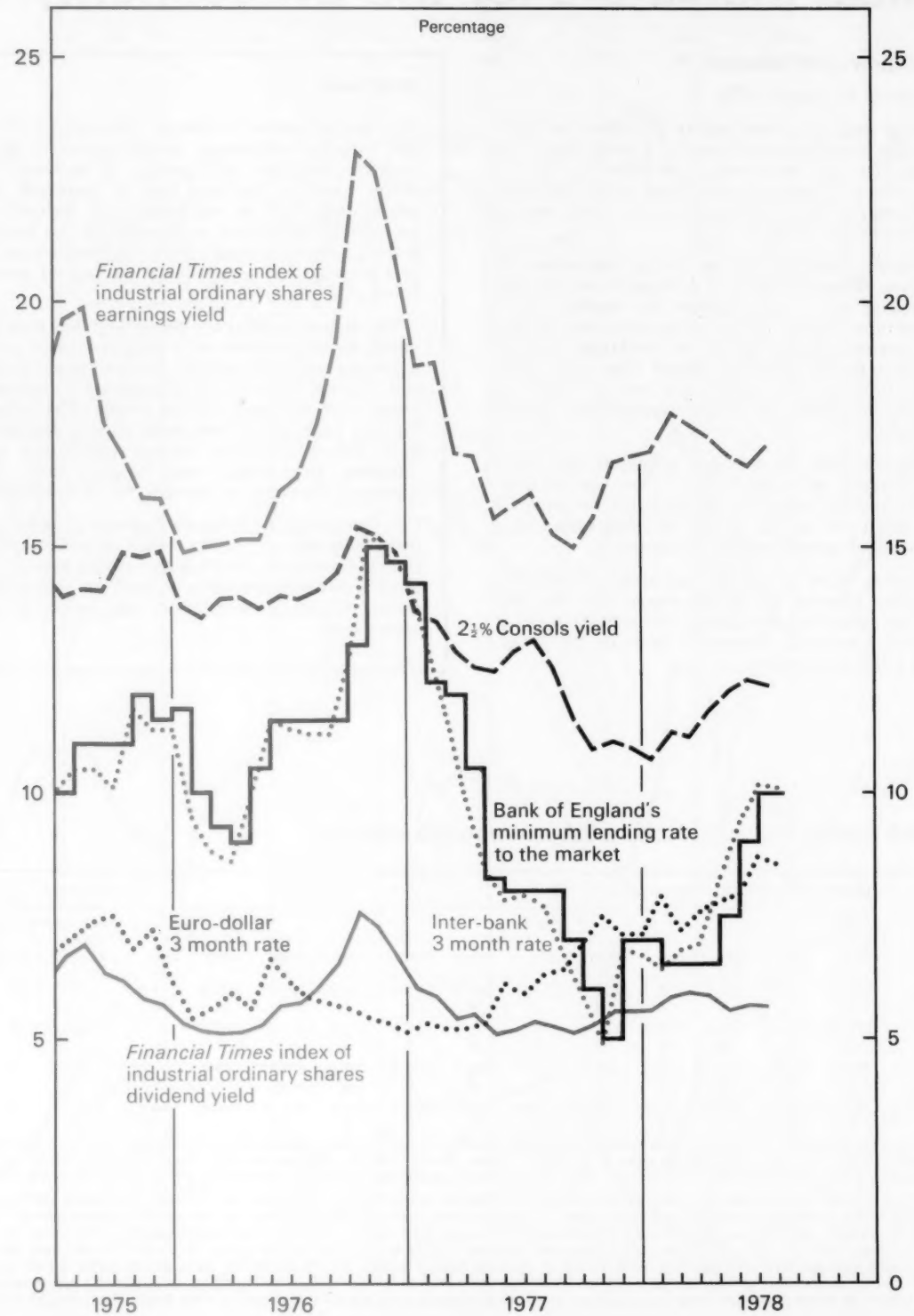
[3] For a minimum term of 3 months and thereafter at 7 days' notice.

[4] Rate paid on deposits of less than £10,000, which was restricted to 9½% from September 1973 to 28 February 1975.

[5] Spread of rates over the day in the inter-bank sterling market.

[6] Net of income tax where this is paid by societies at the agreed composite rate.

[7] A change in basis of calculation of the Earnings yield occurred on 26 February 1973 and is explained in *Financial Statistics Explanatory handbook*. No meaningful average for February 1973 is therefore available.


Percentage
25
20
15
10
5
0
Financial Times index of industrial ordinary shares earnings yield
2½% Consols yield
Bank of England's minimum lending rate to the market
Euro-dollar 3 month rate
Inter-bank 3 month rate
Financial Times index of industrial ordinary shares dividend yield
1975
1976
1977
1978

Cyclical indicators for the UK economy

Recent movements of the indicators

(data available to 14 August 1978)

The composite index of *longer leading* indicators fell again in July, for the ninth successive month, a small rise in the FT-Actuaries 500 index being more than offset by a further increase in short-term interest rates (used in inverted form when compiling the index). Housing starts in June were at their highest for eight months.

The composite index of *shorter leading* indicators fell slightly in June. This was due to a decrease in the amount of hire purchase new credit extended by retailers and a fall in the smoothed figures of new car registrations, together with higher second quarter figures for bankruptcies (used in inverted form for the composite index). The April figure for the index of wages and salaries per unit of output in manufacturing industries, also used in inverted form, showed a continued rise.

The composite index of *coincident* indicators rose again in June, as a result of a small improvement in the Confederation of British Industry's figures of below capacity working, a slight rise in the volume of retail sales and a rise in the index of manufacturing production.

The composite index of *lagging* indicators rose slightly in July. A small increase in unemployment for the first time since September did not change the general upward direction of the inverted, detrended form of the series, which offset a fall in vacancies.

Definitions[1]

This section shows a reference chronology of peaks and troughs representing growth cycles in the UK economy, together with groups of indicator series which have in the past had a consistent timing relationship with the reference cycle. Growth cycles are defined as cyclical movements in the deviations from a long-term trend; thus, the contraction phase of a growth cycle occurs when the rate of growth is below this long-term value.

The historical reference chronology has been determined by examination of a range of series covering aggregate economic activity. Known special economic and climatic factors were discounted in judging the location of reference turning points. The indicators forming each group have been chosen because they have had a consistent timing relationship to the reference chronology, and because there is an economic rationale to account for this relationship.

A composite index for each group of indicators is formed by subtracting from each series the values of its long-term trend, then taking a simple average of the trend-eliminated series after smoothing, scaling to give cycles of similar amplitude, and inversion where appropriate.

Values and timing characteristics of the composite indices

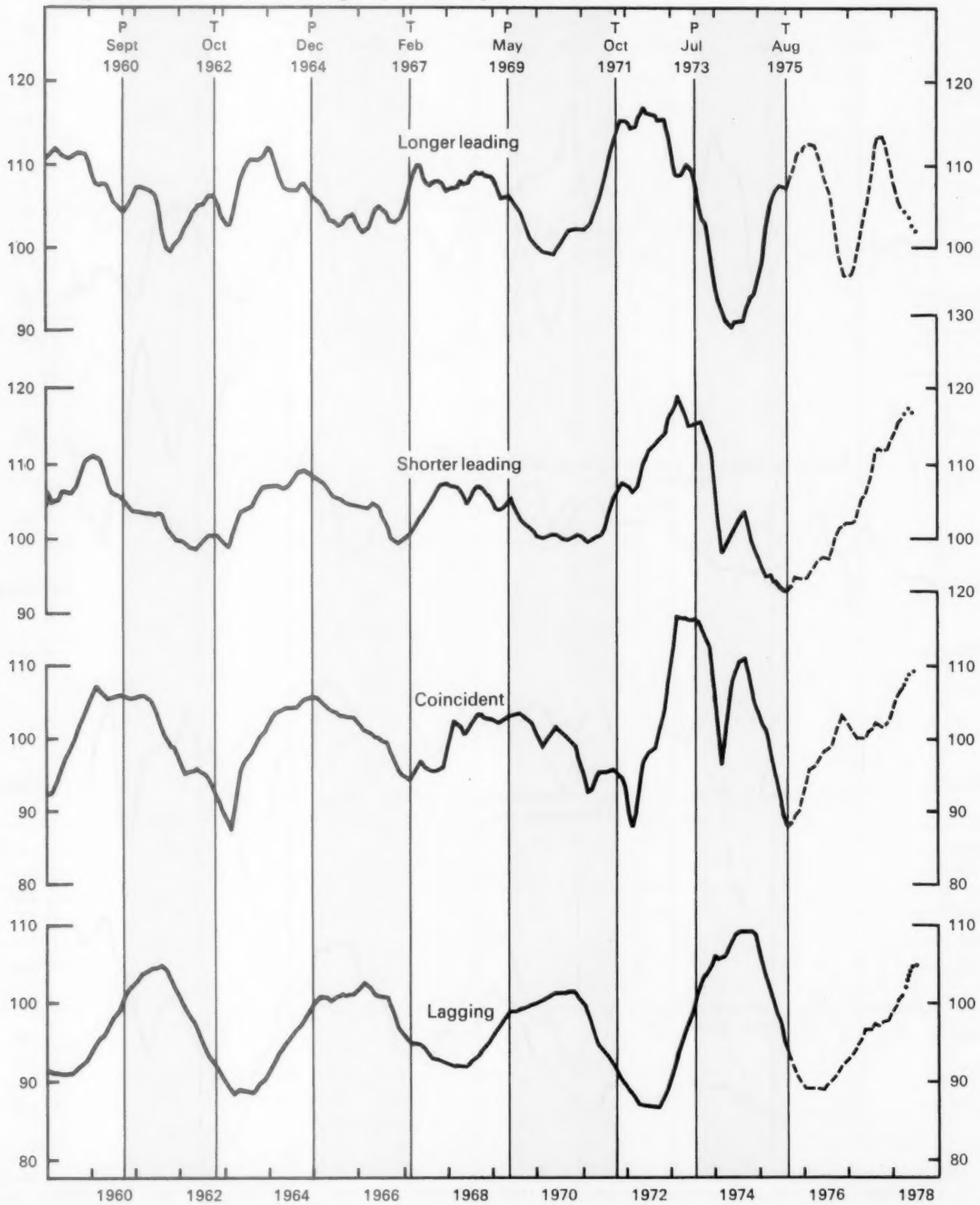
	Most recent values[2] January 1970 = 100												Lead (−) or lag (+) in months relative to reference cycle dates		
	1977					1978									
	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Mean	Earliest	Latest
Longer leading . .	112·3	113·3	113·3	111·7	109·0	107·0	105·4	104·8	104·2	103·5	102·5	101·8	−13	−19	−6
	4	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*3*	*3*	*3*	*2*			
Shorter leading . .	111·3	112·0	111·6	111·8	113·2	114·2	115·5	115·9	116·6	117·3	116·7		−6	−8	−2
	5	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*4*	*3*	*3*				
Coincident . .	102·0	101·7	101·7	102·3	103·6	105·2	106·2	106·9	108·0	109·0	109·4		−1	−6	+4
	6	*6*	*6*	*6*	*6*	*6*	*6*	*6*	*3*	*3*	*3*				
Lagging	97·3	97·0	97·4	97·7	98·6	99·4	100·4	100·9	102·1	103·6	104·8	104·9	+12	+2	+16
	5	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*3*	*2*	*2*	*2*			

[1] A fu explanation of the methodology used is given in *Economic Trends*. No. 257, March 1975 and No. 271, May 1976. Each month a chart of the composite indicators is published with, in the February, May, August and November issues, a further eight pages showing individual indicator series.

[2] In the table, the upper row presents the values of the composite indices for recent months, the lower row the number of series used to form each index. Values of the composite indices are published solely in order to show more precisely the shape of the graphs in recent months. The values are subject to revision each month, both because of revisions to the series from which they are formed and because of the nature of the trend-elimination process used in their calculation; no significance, therefore, should be attached to the current levels of the indicators, although the month-to-month changes may be used as a guide to the location of turning points. On the charts the parts of the curves which are liable to revision in the trend-elimination process are shown in pecked lines; where the composite indices are based on an incomplete set of indicators, the curves are shown as dotted lines. Additional tables giving the values of all series used are available from the CSO Press Office. 01-233 6193.

Cyclical indicators

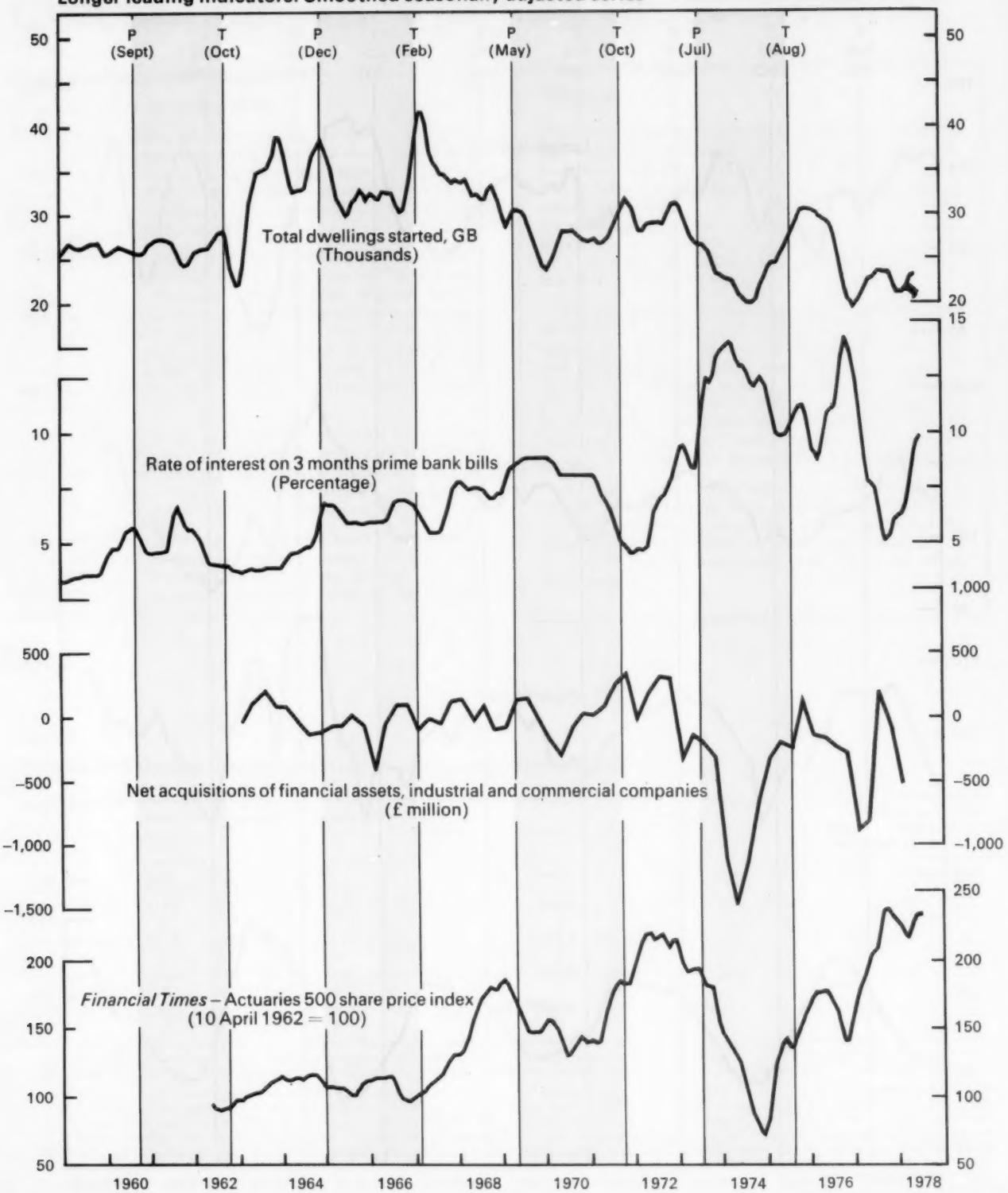
Composite indices of indicator groups. January 1970=100



P = Peak T = Trough

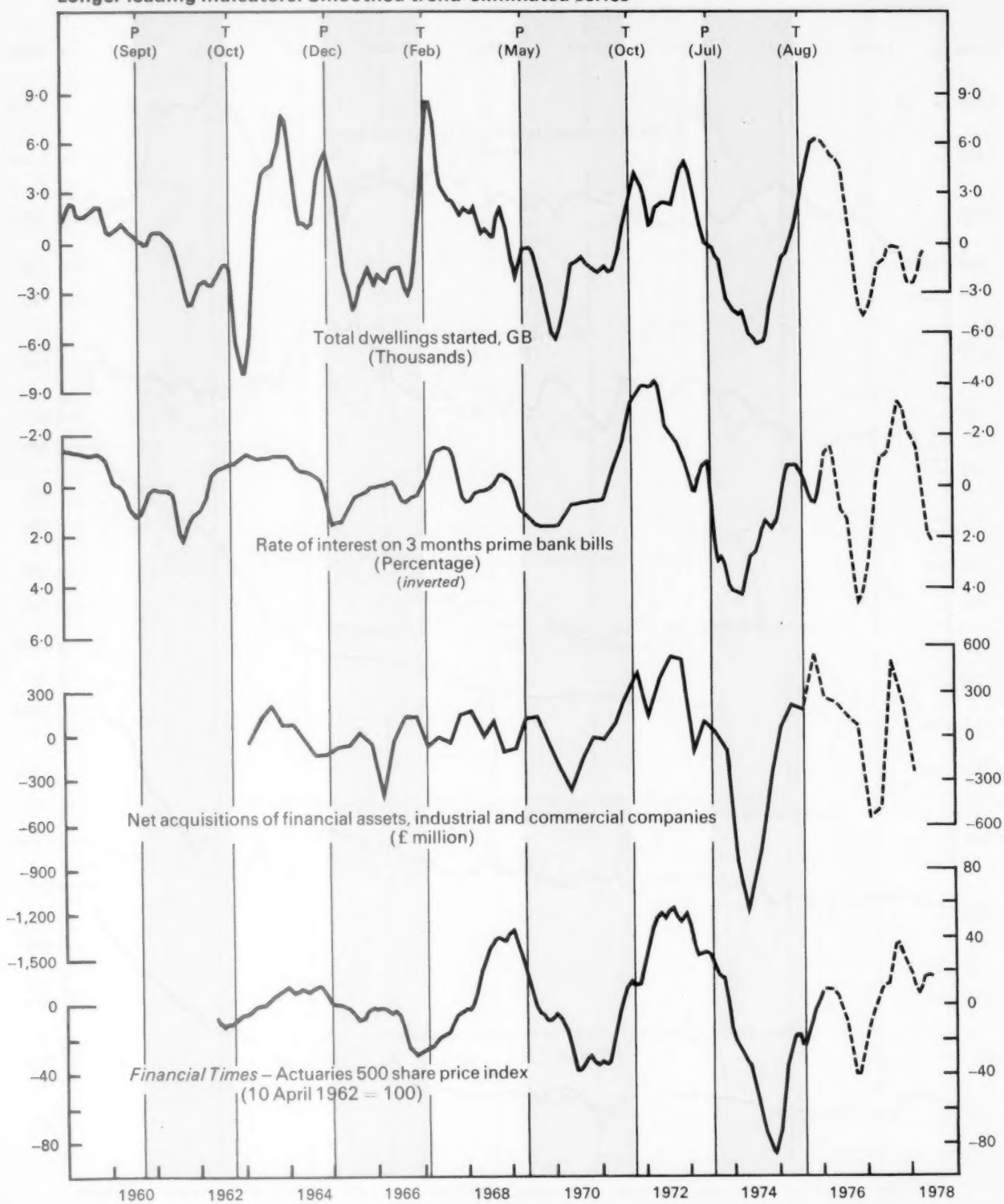
Cyclical indicators by timing classification

Longer leading indicators. Smoothed seasonally adjusted series



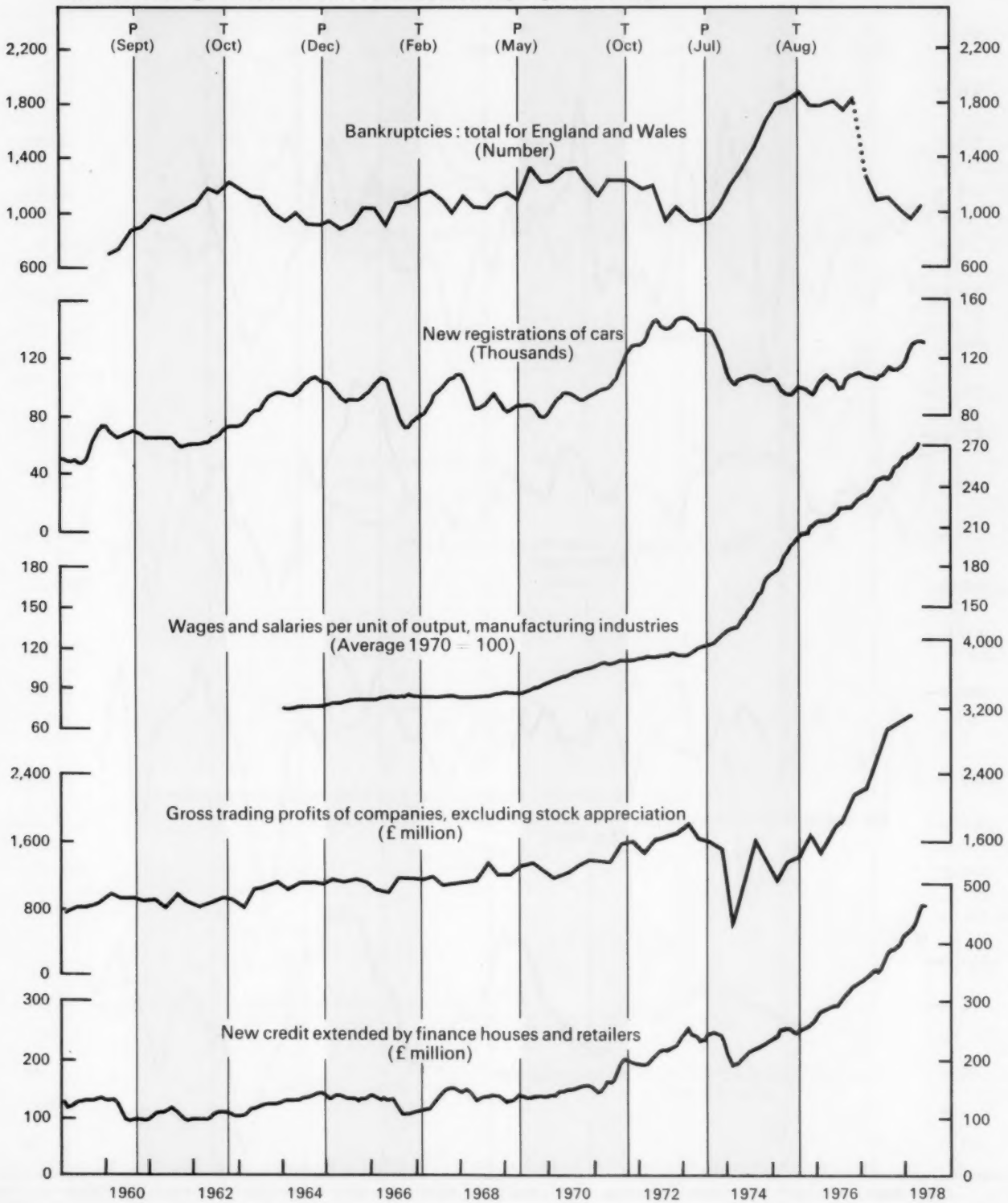
Cyclical indicators by timing classification

Longer leading indicators. Smoothed trend-eliminated series



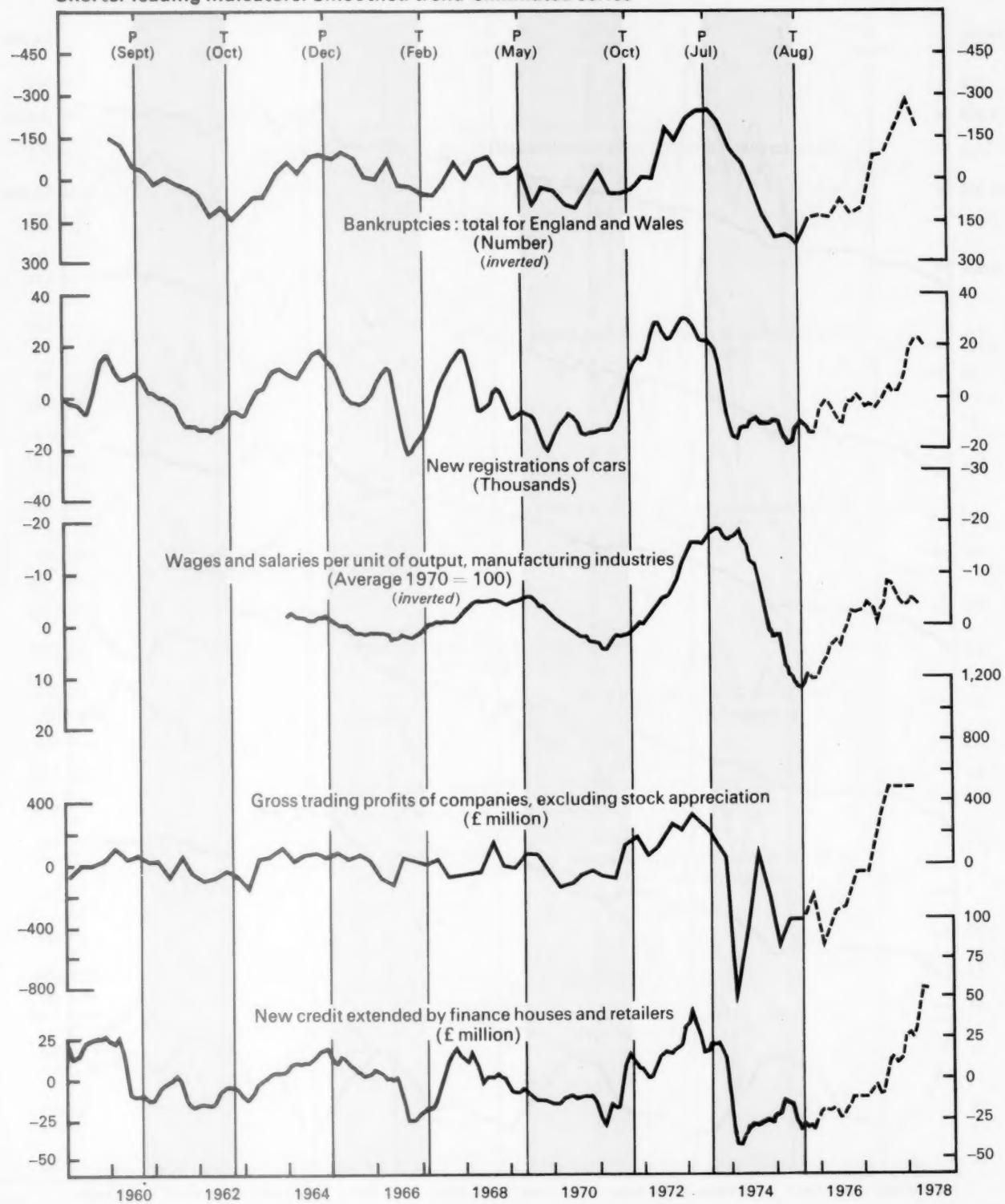
Cyclical indicators by timing classification

Shorter leading indicators. Smoothed seasonally adjusted series



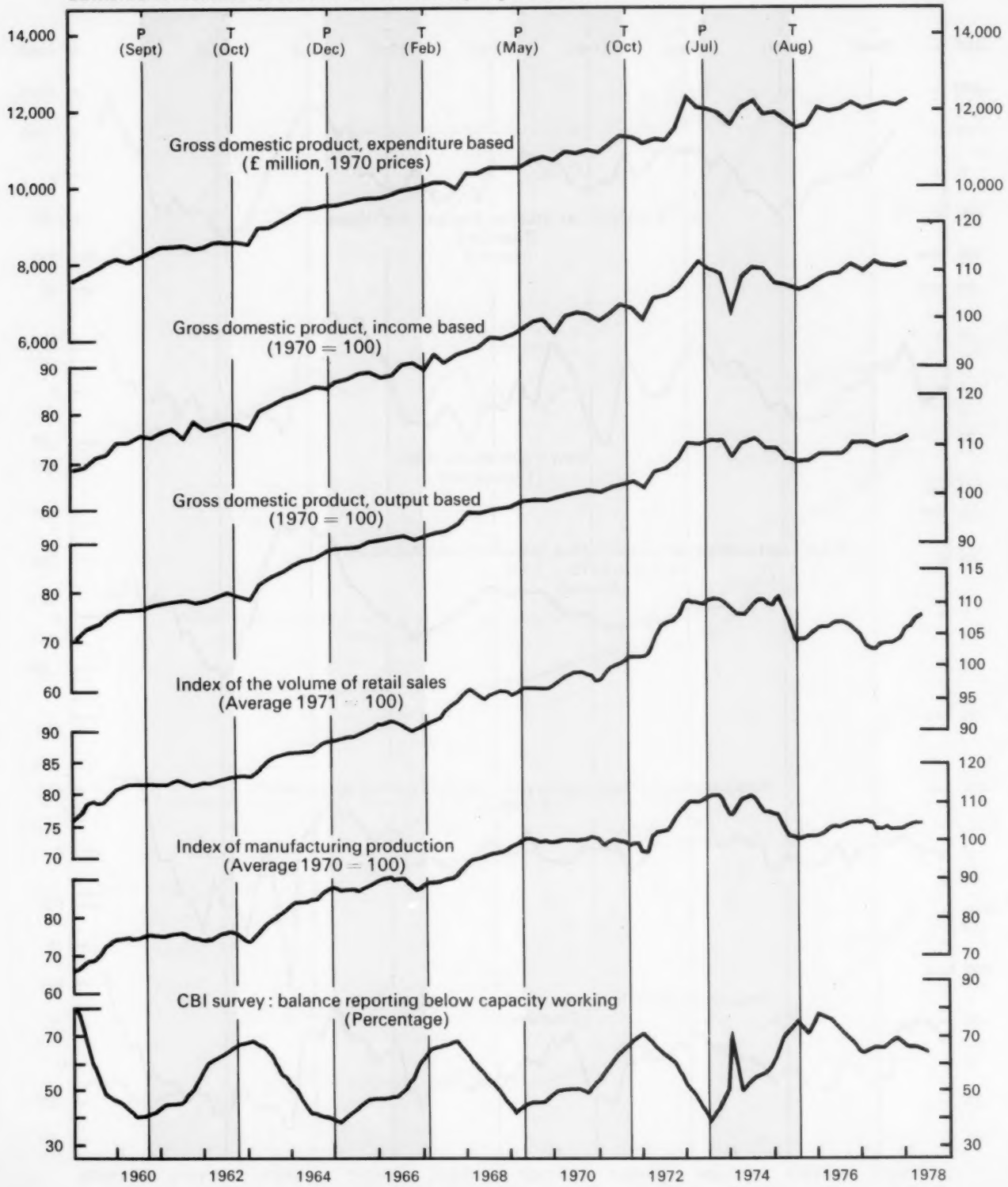
Cyclical indicators by timing classification

Shorter leading indicators. Smoothed trend-eliminated series



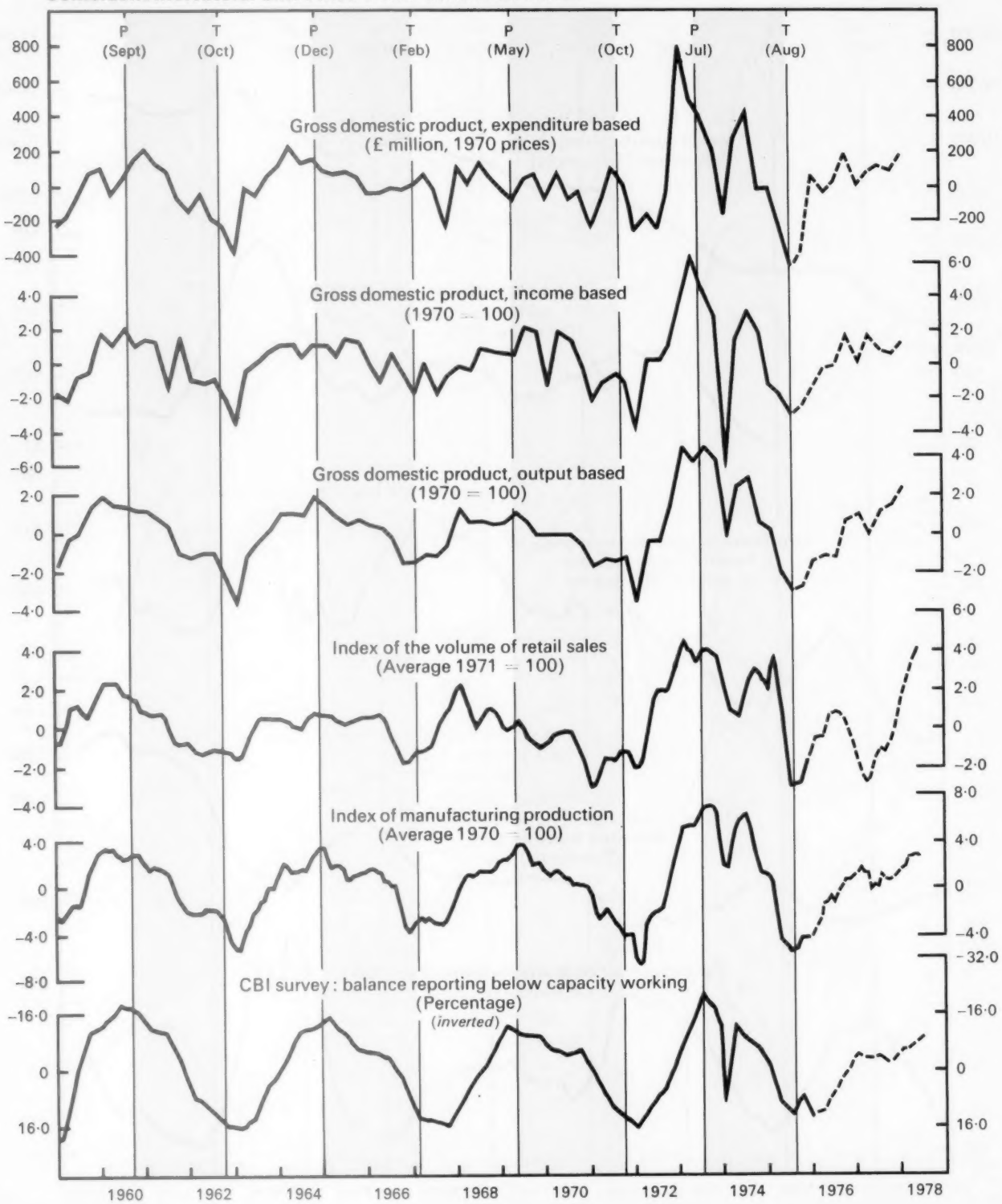
Cyclical indicators by timing classification

Coincident indicators. Smoothed seasonally adjusted series



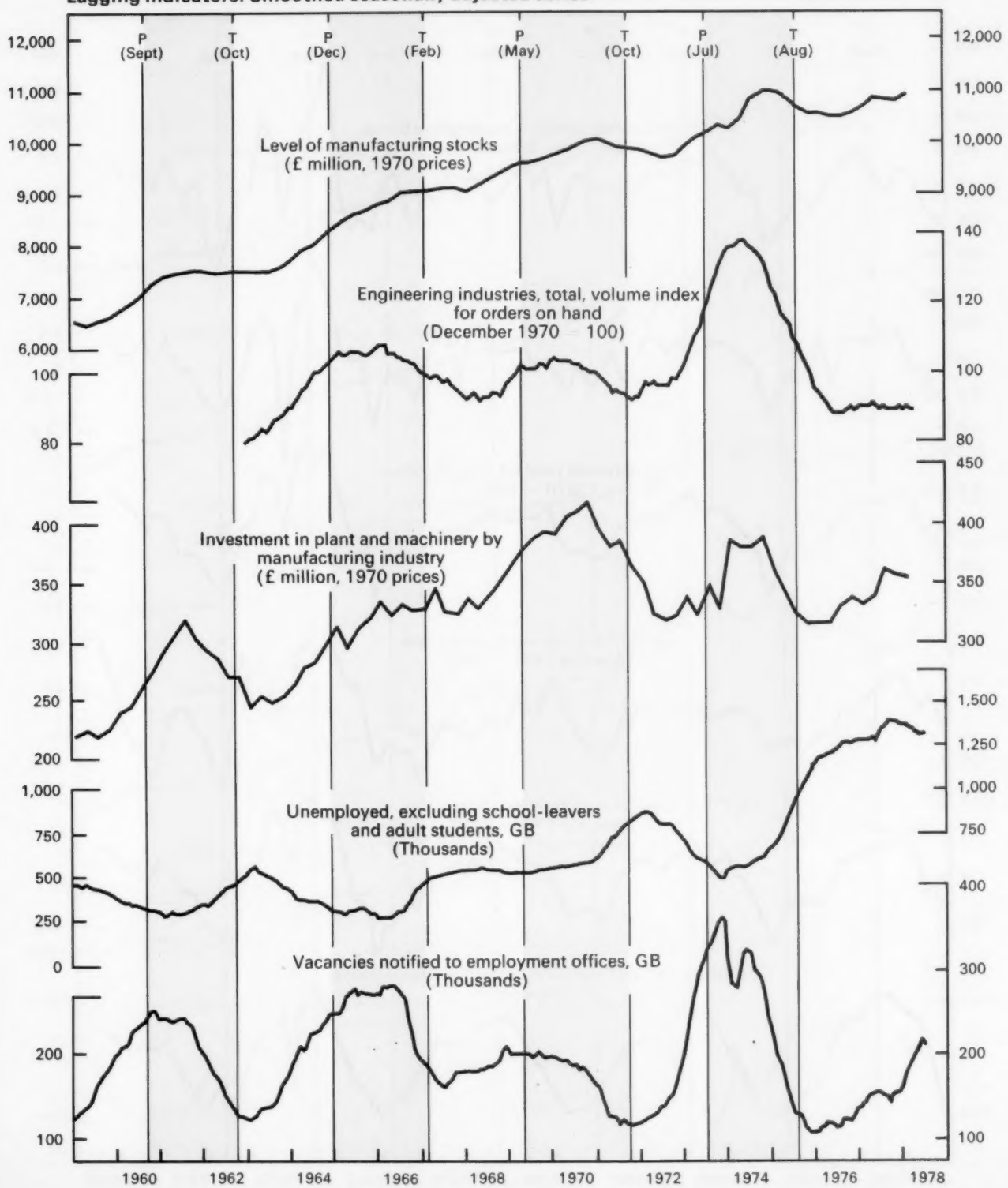
Cyclical indicators by timing classification

Coincident indicators. Smoothed trend-eliminated series



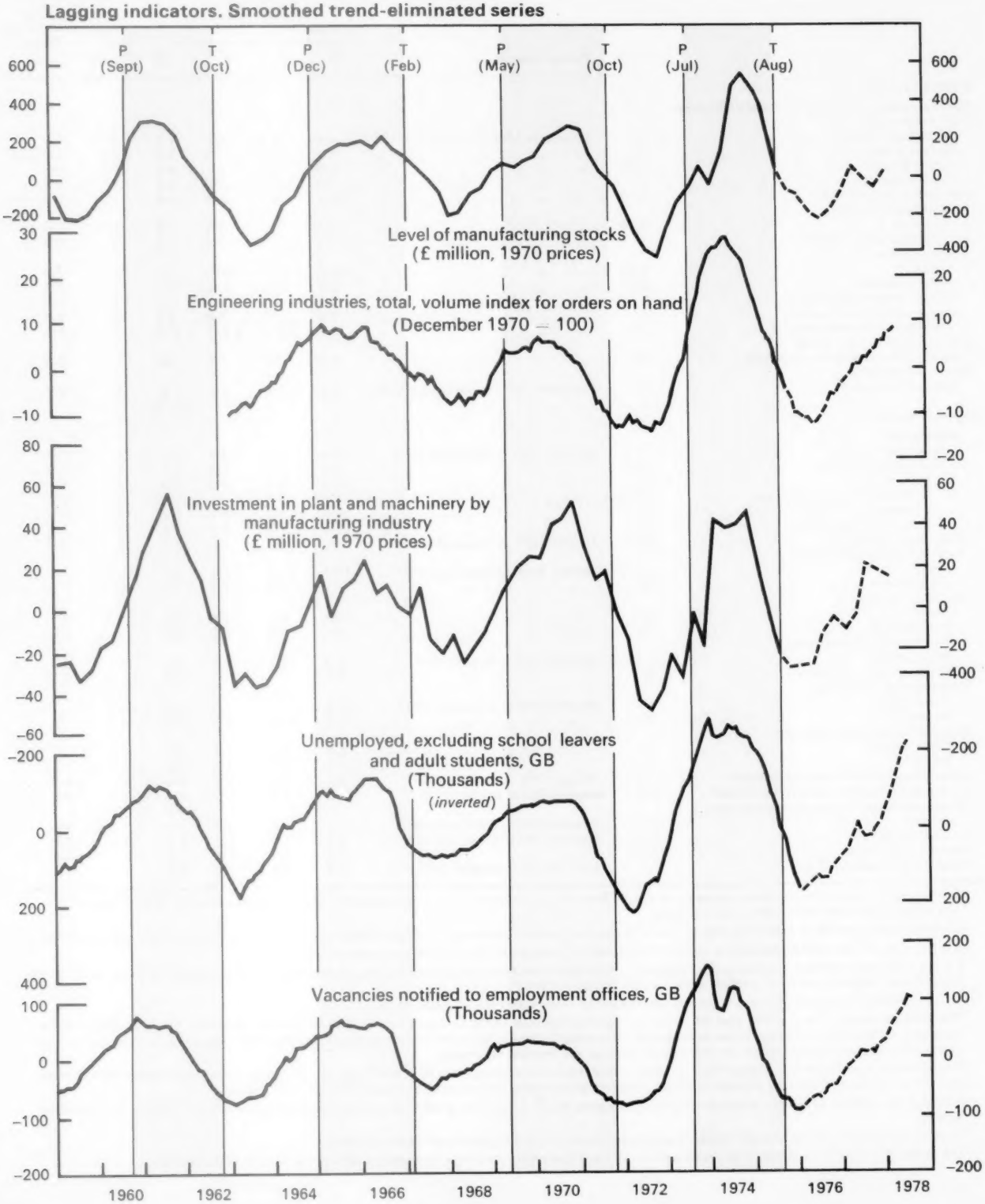
Cyclical indicators by timing classification

Lagging indicators. Smoothed seasonally adjusted series



Cyclical indicators by timing classification

Lagging indicators. Smoothed trend-eliminated series



Measures of variability of selected economic series[1]

	Page	Period covered	Average percentage changes $\overline{CI}$	$\overline{I}$	$\overline{C}$	$\overline{I}/\overline{C}$	MCD or QCD	$\overline{I}/\overline{C}$ for MCD (or QCD) span
Quarterly series								
National income and components at 1970 prices								
GDP, factor cost								
Expenditure based	6	1st quarter 1966 to 2nd quarter 1977	1·4	1·0	0·9	1·2	2	0·5
Income based	6	" " " " " " "	1·7	1·1	1·2	1·0	1	1·0
Output based	6,28	" " " " " " "	1·0	0·6	0·7	0·8	1	0·8
Average estimate	6	" " " " " " "	1·2	0·7	0·8	0·9	1	0·9
Consumers' expenditure	8,10	" " " " " " "	1·2	0·7	0·8	0·9	1	0·9
Fixed capital formation								
Total	8,16	" " " " " " "	2·2	1·7	1·1	1·5	2	0·6
Manufacturing industry	18	" " " " " " "	3·8	2·7	2·3	1·2	2	0·4
Stockbuilding[2]								
Total	8,22	" " " " " " "	*99·5*	*73·9*	*60·3*	1·2	2	0·6
Manufacturing	22	" " " " " " "	*76·2*	*50·8*	*40·6*	1·2	2	0·6
Exports: goods and services	8	" " " " " " "	3·8	3·2	2·1	1·5	2	0·5
Imports: goods and services	8	" " " " " " "	3·0	2·2	1·8	1·3	2	0·4
Personal disposable income	10	" " " " " " "	1·6	1·1	1·1	1·1	2	0·3
Other national income series								
Gross trading profits of companies	58	" " " " " " "	4·0	2·6	3·3	0·8	1	0·8
Other quarterly series								
Construction output	30	1st quarter 1963 to 4th quarter 1976	2·0	1·2	1·4	0·9	1	0·9
Monthly series								
Retail sales								
Total: current prices	12	January 1961 to December 1977	1·0	0·6	0·7	0·9	1	0·9
Total: constant prices	5,12	" " " " "	0·7	0·6	0·3	2·5	3	0·9
Food shops	12	" " " " "	0·6	0·6	0·2	2·9	4	0·8
Clothing and footwear shops	12	" " " " "	2·0	1·9	0·4	5·6	6	0·9
Durable goods shops	12	" " " " "	1·8	1·7	0·7	2·2	3	0·8
Other non-food shops	12	" " " " "	1·1	1·0	0·3	2·8	3	1·0
Cars: new registrations	5,12	January 1971 to December 1977	7·8	7·4	1·6	4·6	6	0·9
Housing: public authorities[4]								
Starts	20	January 1956 to December 1977	11·7	11·4	1·7	6·7	6	
Completions	20	" " " " "	7·8	7·6	1·1	7·0	6	
Housing; private								
Starts	20	" " " " "	8·3	8·0	2·4	3·4	4	0·9
Completions	20	" " " " "	6·1	6·0	0·9	6·5	6	1·0
Index of industrial production:								
All industries	5,26,28	January 1968 to August 1976	1·0	0·9	0·4	2·6	4	0·8
Manufacturing industries	26	" " " " "	1·2	1·1	0·4	2·8	4	0·7
Passenger car production:								
Home market	32	January 1968 to December 1977	11·9	11·7	2·0	5·9	6	
Export	32	" " " " "	11·2	11·0	0·8	13·8	6	
Commercial vehicle production:								
Home market	32	" " " " "	9·2	8·9	1·4	6·2	6	
Export	32	" " " " "	11·0	10·8	1·5	7·4	6	
Unemployed excluding school-leavers[5]	5,36	January 1961 to January 1978	*13·5*	*4·5*	*12·2*	0·4	1	0·4
Vacancies notified to employment offices[5]	5,36	August 1960 to January 1978	*5·9*	*2·4*	*5·3*	0·5	1	0·5
Average earnings all industries and services covered	5,40	January 1963 to December 1977	1·0	0·4	0·9	0·5	1	0·5
Exports: value, f.o.b.	5,46	January 1964 to December 1976	3·1	2·7	1·3	2·0	2	0·9
Imports: value, f.o.b.	5,46	" " " " "	2·9	2·6	1·4	1·9	2	0·9
Money stock (sterling M_3)[3]	50	July 1971 to December 1977	1·3	0·6	1·2	0·5	1	0·5

[1] For a complete description of these measures see article 'Measuring variability in economic time series' in *Economic Trends*, No. 226, August 1972. The following are brief definitions of the measures.

$\overline{CI}$ is the average month to month (quarter to quarter for quarterly series) percentage change without regard to sign, in the seasonally adjusted series.

$\overline{C}$ is the same for the trend component, a smooth flexible moving average of the seasonally adjusted series.

$\overline{I}$ is the same for the irregular component, obtained by dividing the trend component into the seasonally adjusted series, except for those series which are seasonally adjusted using an additive model, see footnotes [2], [3] and [5].

$\overline{I}/\overline{C}$ is therefore a measure of the size of the relative irregularity of the seasonally adjusted series.

The average changes $\overline{I}$ and $\overline{C}$ can also be computed successively over spans of increasing numbers of months (quarters). MCD (QCD), months (quarters) for cyclical dominance, is the shortest span of months (quarters) for which $\overline{I}/\overline{C}$ is less than 1 and therefore represents the minimum period over which changes in the trend are, on average, greater than the irregular movement.

[2] The figures in the table were obtained from an additive analysis of stock changes so $\overline{CI}$, $\overline{I}$ and $\overline{C}$ are not percentage changes but differences in units of £ million. At present seasonal adjustment of the published stocks series is done multiplicatively on the level of stocks.

[3] Although the series is seasonally adjusted additively the figures for $\overline{CI}$, $\overline{I}$ and $\overline{C}$ are presented as percentages of the level of the trend in the preceding quarter.

[4] Series relate to Great Britain, though variability measures calculated from England and Wales component.

[5] The seasonal adjustment is additive, so the figures for $\overline{CI}$, $\overline{I}$ and $\overline{C}$ are not percentage changes but differences in units of thousands.

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Some problems in assessing unemployment trends

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I Introduction

This article is an account of an investigation by the Research Branch of the Central Statistical Office (CSO) into the available methodology for estimating trend and seasonal components in unemployment. The investigation was prompted by the CSO's interest in monitoring the UK economy. During the course of the work, some important general issues have been raised concerning trend estimation and seasonal adjustment. The aim of this article is to bring to light and discuss these points, using the unemployment series in particular for illustrative purposes.

Economic time series are traditionally thought of as consisting of three components – the trend, seasonal and irregular. It will be evident that the estimation of these three components is highly interdependent. To obtain an estimate of the trend, the seasonal effect is first estimated and removed to leave a seasonally adjusted series, which is then smoothed to take out the irregular component and leave the trend. The trend in unemployment shows a clear cycle which is closely related to the general business cycle in the economy. This cycle is illustrated in Chart 1, which shows an estimate of the trend in unemployment formed by taking a three-month moving average of the seasonally adjusted series published by the Department of Employment. In fact, turning points in unemployment lag turning points in the economy by, on average, six months. Details of this 'turning point' approach to trend analysis are to be found in the Cyclical Indicators section of *Economic Trends*. There the trend in the series is separated into a 'growth cycle' component and a 'longer term' trend component, but the two will be considered as one in this article: however, the conceptual separation explains the use of the term 'trend cycle' for this component.

Chart 1 also serves to illustrate one feature which prompted the investigation. This is the hump in the summers of 1976 and 1977, apparently caused by a failure to remove all the seasonal effect in these months, which created difficulties in interpreting underlying movements in the unemployment series. It was on account of this that the Research Branch undertook its review of techniques appropriate for estimating trends in unemployment.

Section II of this article is a description of some of the technical problems of seasonal adjustment and trend estimation; it provides a general account of the methods which we have found useful in studying the unemployment series. Section III discusses the unemployment series and its seasonal pattern, and shows the changes which have occurred in recent years and the problems these cause for interpretation. Section IV looks at the separation of the unemployment series into components, considers the appropriate method of adjustment for each component, and shows that aggregation of the seasonally adjusted components gives a smoother series, with much smaller summer humps. Section V uses the results of Section IV to investigate trends in unemployment in recent years, and attempts to draw some general conclusions about the problems of trend and seasonal analysis. The Appendix contains more detailed technical information on some of the methods described. in Section II.

It is clear that trend estimation and seasonal adjustment are inextricably linked, and so a good estimate of trend is dependent on the seasonal adjustment obtained. For this reason, much of this article consists of a discussion of seasonal adjustment methods and models, and some new techniques are introduced and considered. However, it should be stressed that the emphasis of the article is on trend estimation, and the seasonal adjustment methods used are chosen for this purpose; as a result they would not necessarily be suitable for producing a seasonally adjusted series for publication. For example, for trend estimation purposes, seasonal adjustment runs are best updated monthly, but this produces constant minor revisions to the most recent seasonally adjusted values, which is contrary to the present general practice for a published series. The outcome of our study is principally the illumination of some essential features of seasonal adjustment and trend estimation. The studies described in this article do not imply that changes should be made in the methods of seasonal adjustment used by the Department of Employment.

II Seasonal adjustment and trend estimation

Relationships between trend and seasonality

Before proceeding to discuss techniques for trend and seasonal analysis, it is useful first to establish the mathematical basis of some alternative approaches. As mentioned in the introduction, time series of original observations are often regarded as being a combination of three unobservable components, namely the trend level, the seasonal and the irregular. It will help to clarify thoughts if the usual notation is introduced. For month t,

O_t denotes the original observation,

C_t denotes the trend level (or trend-cycle),

S_t denotes the seasonal component, and

I_t denotes the irregular component.

The aim of trend-seasonal analysis is to estimate these components. A seasonally adjusted series is defined as the original with the estimated seasonal component removed.

*Acknowledgement. We are grateful to members of the Department of Employment for their co-operation during the course of this work, and our thanks are also due to P. B. Kenny (Head of Research Branch), M. Semple and other colleagues in the CSO for many helpful discussions during the preparation of this article.

An assumed mathematical relationship between the original observation and its components is called a model. The model obtained by taking the observation to be the product of the components is called multiplicative, i.e.

$$O_t = C_t \times S_t \times I_t \,.$$

In this case the trend cycle C_t has the same units of measurement as the original observations, and the seasonal and irregular components are dimensionless factors varying around unity. For this model, seasonal adjustment is carried out by dividing the original observation by the estimated seasonal factor. The additive model is similarly defined as

$$O_t = C_t + S_t + I_t \,,$$

where all the components have the same units as the original observations; here seasonal adjustment involves subtracting the estimated seasonal component.

In series which exhibit multiplicative seasonality the seasonal variation about the trend is proportional to the corresponding trend level, whilst for additive seasonality the seasonal variation is constant. For example, suppose that the trend in a series doubles its level from any one year to another; if the seasonal variation around the trend also doubles then the multiplicative model is appropriate, while if it remains the same the additive model applies.

The seasonal variation in most, but by no means all, economic time series tends to be proportional to trend level, and in the early days of seasonal analysis methods based on multiplicative models were predominant. This is perhaps the reason why the usual terminology is biased towards the multiplicative model; for example, the seasonal component is often called a seasonal factor even if the adjustment is additive.

The estimation of the components of such models using moving averages has a long history, although until recently computational problems forced analysts to use fairly simple procedures. Now, however, computer programs are available which make it possible to apply complex iterative procedures as a matter of routine. The program most generally used in the Government Statistical Service originated in the United States Bureau of the Census, and is known as 'the X-11 Variant of Census Method II', or simply 'X-11' (Shiskin, Young and Musgrave, 1967). The X-11 program can be used to estimate the components of either the multiplicative or additive models defined above. An assumption implicit in this and in most automatic approaches to trend-seasonal analysis is that while there will be changes in the trend component from month to month and in the seasonal factors from year to year, these changes will not be abrupt and will take place only gradually. Indeed, this is the justification for using moving average estimation techniques.

The additive and multiplicative models are the simplest possible ways of representing the behaviour of a time series, and naturally there is no guarantee that either of them will, in practice, represent a particular set of data well. Durbin and Murphy (1975) developed techniques for seasonal analysis based on a 'mixed additive-multiplicative' model of the form

$$O_t = C_t + \alpha_t + \beta_t C_t + I_t \,,$$

where the seasonal component $(\alpha_t + \beta_t C_t)$ is composed of both additive and multiplicative parts but the irregular variation in the series is assumed to be independent of its level. The components are estimated using a combination of moving average and regression based techniques.

There are series with a high degree of multiplicative seasonality for which the conventional multiplicative procedure does not give satisfactory results. This can happen particularly if there is more irregularity in the seasonal trough than the usual model indicates; an adjustment carried out by dividing by a very small estimated seasonal factor can amplify this irregularity so that it swamps the seasonally adjusted series. To produce a smoother seasonally adjusted series in these circumstances we have developed, from an idea originally suggested by J. P. Burman of the Bank of England, a 'pseudo-additive' method based on the model

$$O_t = C_t \times (S_t + I_t - 1) \,,$$

where, as for the multiplicative model, S_t and I_t are dimensionless factors varying around unity. The X-11 framework has been used and so the components are estimated iteratively using moving averages. By definition the seasonal component is $C_t \times (S_t - 1)$, which is subtracted from O_t, leaving the seasonally free part as $C_t \times I_t$.

We have presented here four alternative trend-seasonal models; other more complex models are easily envisaged. However, it must be borne in mind that it is impossible to define precisely what is meant by trend, seasonal and irregular except in terms of estimates obtained by a particular method. This means that the comparison of results of alternative procedures must always be somewhat arbitrary, and it will ultimately be a matter of judgement as to which results are most satisfactory.

Technical procedures

The objective of trend and seasonal analysis is to estimate the trend and seasonal components of an appropriate model for the observations, as an aid to identifying underlying movements in the series. To this end there are many judgements to be made in choosing suitable procedures.

The first two important decisions are often, in practice, interdependent: namely, the choice of both a model for the data and a method for estimating the components of the model. In this article close attention is directed to the previously mentioned additive, multiplicative and pseudo-additive models, using the X-11 moving-average method for estimating the components of these models, whilst noting that on occasions other models and methods may be more suitable.

The reason for favouring the X-11 based approach is that it offers a well established, flexible method that has been found to be fairly robust in use over a long period of time, not only by the Government Statistical Service but in application by other organisations throughout the world. The X-11 method will adapt quite well to certain departures from the simple models postulated. In particular the additive X-11 method will give reasonable adjustments for underlying multiplicative models provided the trend level is not changing too rapidly, and vice-versa. A brief description of the X-11 method is given in the Appendix to this article.

The problem of finding the seasonal-trend model most appropriate for a given series may be exacerbated by the fact that no one of the simple models may fit the data well over its entirety, and it is here that graphical analyses are often helpful. Of course, the single most important diagnostic tool is a graph of the orignal series itself. Often this graph will show directly whether or not the seasonal variation is independent of the trend level. Another graphical aid that has been found useful is a chart of 'seasonal amplitude' versus average 'trend' for each year of the data span, the points being connected in chronological order. The 'trend' is obtained as a 21-term weighted moving average (Durbin and Murphy, 1975, p.389) of the original series and the 'seasonal amplitude' is calculated as the average, for each calendar year, of the differences between the original series and the trend, without regard to sign. On this chart, a straight line parallel to the trend axis indicates additive seasonality and a straight line in a direction through the origin indicates multiplicative seasonality. As well as a graph based on annual averages, charts of deviation from trend against trend level can be plotted for each month separately in order to see whether different types of model would be appropriate for different months. These charts provide useful rules of thumb for identifying seasonal models.

In difficult cases, where no simple pattern emerges, it is also helpful to look at the results of seasonal analyses based on one or more of the simple models – a pragmatic approach. A plot of the resulting seasonally adjusted series along with the original is useful here: if the adjusted series shows an annual pattern which reflects the seasonal pattern of the original, either directly or inverted, this may be indicative of an inappropriate model.

Other useful graphs are included in the output of the X–11 program. These are plots, one for each month, of the seasonal-irregular (S-I) ratios or differences and the final seasonal factors. These can provide useful evidence of changing seasonality. Other procedures for diagnosing seasonal behaviour, intended mainly for use with their regression based method for seasonal analysis, are presented by Durbin and Murphy (1975).

After a suitable seasonal-trend model has been chosen for use with the X–11 program, there are a number of further decisions to take, which can be categorised as program options and operational considerations. By the latter we mean such questions as whether it would be better to disaggregate the series and the mode of operation of the program. We discuss these points briefly here, and in later sections give some specific illustrations in the context of the unemployment series.

Program options

Within the X–11 program, the lengths of moving averages selected for estimating both the trend cycle and the seasonal components can be specified by the user. More usually the trend cycle moving averages are not pre-specified but are selected automatically by the program, the choice depending on the amount of irregularity in the series. The trend cycle moving averages are of lengths 9, 13 and 23 terms: the weights are those derived by Henderson (1916). The longest (23-term) moving average is chosen for highly irregular series which require a higher degree of smoothing, and the 13- and 9-term Hendersons are used for smoother series.

The alternatives for estimating the seasonal factors are 3-, 3×3-, 3×5-, or 3×9-term moving averages or a simple average covering all years of the series. (By a 3×5-term moving average, for example, is meant a weighted 7-term moving average equivalent to a simple 3-term moving average of a simple 5-term moving average.) The standard option in the program for estimating the final seasonal factors is the 3×5-term moving average. For choosing the lengths of seasonal factor moving averages, Shiskin, Young and Musgrave (1967, p.16) give some guidelines based on the so-called moving seasonality ratios (M S Rs). These are measures, for each month, of the year-to-year variation in the irregular for that month compared with the year-to-year variation in the seasonal factors for the same month. Use of the shorter moving averages is indicated when the M S R is low, that is when the amount of variation in the irregular is low compared with that in the seasonal. As a general rule, shorter seasonal factor moving averages allow the analysis to adapt more quickly to changing seasonal patterns, but more of the irregular in the original series will be incorporated in the estimated seasonal, with the result that the seasonally adjusted series may look smoother than it should.

At first sight this may not be considered a problem in itself, particularly if the emphasis of the analysis is on trend estimation. However, the dangers of using short seasonal factor moving averages are two-fold. Because more of the irregular component is contained in the estimated seasonal, the estimates of trend and seasonal for the latest observations will be subject to an increased amount of revision as new data are included in the analysis. The second danger occurs around turning points in the series. If turning points in the trend are sharp relative to the seasonal movements in the series, automatic seasonal analysis procedures run the risk of failing to follow closely the changing trend. The use of shorter seasonal factor moving averages, which put greater weight on each individual observation, increases the chance of part of the change in trend being interpreted as a changed seasonal pattern. Thus in practice, because of these dangers, the use of the shorter moving averages is avoided unless it is clearly evident that the standard 3×5-term moving average is not able to adapt quickly enough to changing seasonal patterns.

Distortions to estimates of trend and seasonal can occur for a number of other reasons, and an important part of any trend-seasonal analysis is to ensure that adequate allowance is made for distorting influences. Within X-11 there are two facilities intended for this purpose, namely the prior adjustment and extreme value modification procedures. Prior adjustments to the original data are made if there are any abrupt changes in the level of the series, or in the seasonal pattern, or if there have been exceptionally large irregular movements (resulting from severe industrial disputes, unusually hard weather or similar exceptional events), provided of course that the distorting influences are known and their effects can be quantified. Otherwise the X-11 program itself contains a test (the extreme value procedure) whereby unusually high or low values are identified and discounted in the calculation of seasonal factor and trend estimates. The treatment of extremes is decided by the weighting procedure, described in the Appendix, which is

governed by the optional 'sigma-limits'. The standard options (those used unless specified otherwise) are 1·5 and 2·5 standard deviations, but there seems to be a growing feeling that these limits are too narrow, causing too many irregulars to be designated as extreme. In particular, for unemployment series the Department of Employment uses 2·5 and 3·5 as the inner and outer sigma-limits respectively.

Recalling that the purpose of trend and seasonal analysis is to aid interpretation of underlying movements in the series, we should note that there may be other systematic influences on the series, besides normal seasonal ones, which mask the underlying movements. In this context the X-11 program contains an option for estimating trading day effects, that is the influence of different days of the week on the series. For example, calendar monthly figures for retail sales would be affected by the numbers of Fridays and Saturdays in the month, because those are the days of highest sales. (The published retail sales index is based on 4 or 5 week periods to avoid this problem.) Other series may be affected not by the numbers of the different days of the week in the month but by the numbers of actual working days in the month. In this latter case the systematic influences can be removed by prior adjustment.

Operational considerations

Deciding the level of disaggregation at which to work is a general problem in trend and seasonal analysis, to which there is no easy answer. On the one hand, too much disaggregation can produce component series which are highly irregular and have no stable seasonal pattern, while the aggregate series may be smoother and exhibit clear stable seasonality. On the other hand the component series may show stable seasonality, but if their seasonal patterns are different and the proportions of the components in the total are changing, the seasonality of the aggregate series may be variable. It should be noted that for additive adjustment the process of trend and seasonal estimation involves only linear operations on the data (except for the extreme value procedure), and so if the same additive procedures are used throughout, the order of estimation and aggregation is immaterial; the result for the aggregate series will be the same whether the estimation is direct or by means of aggregating the estimated components. However, the order of estimation and aggregation is important if not all the component series are additive or if different additive procedures are used.

A further general point of interest, related to the aggregation problem, is the question of certain constraints which the seasonally adjusted series is sometimes required to satisfy. One example of this point is the demand that the sum, for any month, of the seasonally adjusted component series should equal the seasonally adjusted aggregate for that month. Alternatively it may be required that the total of the seasonally adjusted series should be the same as the original over each calendar (or financial) year. The use of constraining procedures can lead to problems in seasonal and trend analysis. For example, the aggregate series may have a more stable seasonal pattern or smoother trend than do the components separately, as we have discussed above, in which case better seasonal and trend estimates for the aggregate series are produced by direct analysis of that series rather than by combining analyses of the separate components. However, in that case the 'adding-up' constraint is not automatically satisfied. The simultaneous seasonal-trend analysis of groups of series subject to constraints is an area where further research is needed.

Lastly in this section we consider the mode of operation of the trend and seasonal estimation process. The X-11 program automatically produces forecasts of the seasonal factors for the twelve months following the month of the latest observation. These forecasts, called 'year-ahead seasonal factors', can be used to seasonally adjust the coming year's data as it becomes available month by month. At the end of the year the X-11 program can be re-run to update the trend-seasonal analysis and to produce year-ahead seasonal factors for the next year. Because this mode of operation is the one normally used for seasonal adjustment purposes we call it 'operational' adjustment. Implicit in this mode of operation is the assumption that the seasonal factors are fairly stable and can be forecast with a reasonable degree of accuracy. An alternative to the operational adjustment is to re-run the full trend-seasonal analysis program every month, which we call 'up-to-date' adjustment.

A recent study by the Research Branch (Morris and Webb, 1978) has shown that, in general, 'up-to-date' seasonal adjustment provides a better basis for methods of estimating the trend of the most recent observations than does 'operational' adjustment. However, the costs of producing and publishing seasonally adjusted figures on an 'up-to-date' basis are considerable; in particular, the past series of seasonal and trend estimates will be revised with the addition into the analysis of each new month's figure. The revisions will usually only extend over the last four to five years of the data, but in exceptional circumstances could go back even further. We return to this discussion later, for the moment noting that the 'up-to-date' mode of operation has particular advantages for the pseudo-additive method, where the production and quality of year ahead seasonal factors depends critically on the availability and quality of forecasts of the trend.

III Seasonal patterns in unemployment

The unemployment series is the count, taken monthly, of the number on the unemployment register. This section examines the seasonal pattern of the series for Great Britain. Graphs of the series as presently defined by the Department of Employment, for males and females separately, are given in Chart 2: the span of data used is from January 1964 to June 1978. Included in the definition are those unemployed aged 18 or over who have not been employed since leaving full-time education, but school leavers aged under 18 seeking their first job are excluded, as are adult students registered for employment during their vacations. No seasonal adjustment is currently made of the unemployed school leavers under 18 due to difficulties inherent in the data – in particular, the seasonal pattern is substantially altered by changes in the school leaving regulations (notably in 1976, when school children of the appropriate age were permitted to leave at any time after the Spring bank holiday), and the changing position of Easter in relation to the unemployment counts also leads to erratic movements in the seasonal patterns of April and May. Details of our work on this series are given in Section IV.

Before any seasonal adjustment can be made, it is necessary to carry out prior adjustments to the raw data to allow for any freak effects which might distort the estimation of the seasonal pattern or trend of the series. For the unemployment series considered here, these were made in the months of January to May 1974 to compensate for the effect of the three-day week and energy crisis, and also in January 1975, when because of an industrial dispute, the actual count referred to the third, rather than the second, Thursday in the month. In both cases the prior adjustment factors were supplied by the Department of Employment. In December 1974, and in November and December 1976, no figures were produced because of disputes; these gaps have been filled by estimates supplied by the Department of Employment.

As described in Section II, the first stage in the trend-seasonal analysis of a series is to establish the type of trend-seasonal model appropriate to the series and which method of analysis to use. It has already been stated that the Government Statistical Service generally favours the X-11 method, and the work described here uses this technique almost exclusively; however at the end of this section we do briefly discuss the use of one other method. To determine the model required we consider amplitude-trend plots for the males and females GB unemployment series as defined above, which are shown in Chart 3. An additive model is indicated for the males series, because the seasonal amplitude appears independent of the trend level. The case for females is less clear, as the points on the plot for 1976 and 1977 suggest some evidence of multiplicativity. An exploratory analysis has been carried out using a multiplicative model for this series, but the results of a seasonal adjustment run showed some overadjustment in recent years. Hence, there is not really sufficient justification for replacing the currently used additive model with the multiplicative.

Chart 2 shows the seasonally adjusted version of each of the two series produced by X-11 using additive models and the standard 3×5-term moving averages in the estimation of the seasonal factors. The standard sigma limits of 1·5 and 2·5 used in the detection of extreme values are felt to be rather narrow, and we have replaced them with wider limits of 2·5 and 3·5. These wider limits, which are those used by the Department of Employment, have in fact been used in all the X-11 runs described in this article. Chart 2 shows that the seasonal adjustment during the summers of 1976 and 1977 is not totally satisfactory. The hump during May to September in both these years appears to be the result of X-11 not responding sufficiently to the changing seasonal pattern.

Charts 4a and 4b show the year-to-year changes in the patterns of the S-I differences (defined in the Appendix) and seasonal factors for each month for the males and females series respectively. The changing seasonal pattern in July, August and September is immediately obvious, and the diagrams show that the seasonal factors, of the females series especially, are lagging somewhat behind these changes in the last few years. As has been mentioned already, such a lag is an inevitable feature of the operation of the seasonal factor moving averages. The lag is the cause of the humps in the seasonally adjusted series, as the estimated seasonal factors for the summer months are larger in magnitude than they would be if the changing seasonal pattern was being followed more closely. The seasonal factors in some other months are also varying quite substantially. In particular, there seem to be marked shifts in seasonal behaviour in November and December for males, and in April, May and June for females – and again the esimated seasonal factors appear to be lagging somewhat behind the changing seasonal pattern.

As mentioned earlier, one way of following the changing seasonal pattern more closely is to use shorter moving averages in the estimation of the seasonal factors. The moving seasonality ratios calculated by X-11 for each month, which are the usual guidelines as to the length of moving average required, give no conclusive evidence for the use of 3×3-term moving averages throughout the year rather than the standard 3×5-term, though there is some evidence in their favour in the summer months, particularly for the females series. Chart 5 compares the seasonally adjusted series for the period 1976–78 produced by X-11 using additive models in the two cases of 3×3- and 3×5-term moving averages for all months. Whilst some slight improvement in the seasonally adjusted series can be seen in the females series, the summer humps remain, and an inspection of the S-I differences and seasonal factors produced in the X-11 runs shows that the use of 3×3-term moving averages has not enabled the seasonal factors to follow the changing summer seasonal pattern much more closely. The general arguments for avoiding moving averages which are shorter than necessary have already been given; on this evidence, the use of 3×3-term averages for all months is not to be preferred.

Before proceeding to consider other means of tracking the changing seasonal pattern, we briefly consider an alternative method of trend-seasonal analysis. It was mentioned earlier in this section that there is some evidence of multiplicativity in the females unemployment series. This suggests that there might be some value in using the mixed additive-multiplicative model of Durbin and Murphy (1975) and the corresponding seasonal adjustment program, mentioned in Section II. Some preliminary work has been carried out using this method on the total unemployment series (excluding school leavers under 18). The results do not show any great improvement over those obtained using X-11 as above; indeed, the summer hump tends to be slightly more pronounced. For this reason, the method has not been further used in this analysis.

IV Analysis of component series

Choice of components

The seasonal behaviour of a series can change for a variety of reasons. The most obvious is a genuine alteration in the response of the series to seasonal influences. Another may be that the series consists of two or more components, each with its own characteristic and stable seasonal pattern. Although the seasonality of each component series may not change to any great extent, the seasonal pattern of the total series may be affected if the relative proportions of the components change. With this in mind, we consider the type of component series which would cause the summer hump effect which we have observed in the seasonally adjusted total series. The kind of component which would cause this effect is one whose contribution to the total has

increased in recent years, whose seasonality is proportional to its trend (so that its seasonal effect on the total series will increase as its level increases) and whose seasonal peak is in the summer months (thus pulling the summer values of the total series closer to the trend level).

Much publicity has recently been given to the increasing numbers of those leaving school and higher education who are unable to find jobs immediately and so join the ranks of unemployed. Until recent years the number of registered unemployed school leavers has been a relatively small proportion of the total unemployed, thus having little effect on the seasonal pattern of the total series. However, in the last three years the proportion registering as unemployed among those leaving full-time education has increased dramatically, producing a corresponding change in the seasonal pattern of the total unemployed series. The 'school leavers' component obviously peaks during the summer and so fits the specifications outlined above for a possible cause of the summer overadjustment. The unemployment series as currently defined for seasonal adjustment excludes school leavers aged under 18, but not those aged 18 or over leaving full-time education, and so it is possible that a better seasonal adjustment would be obtained if this 'adult school leavers' component could be removed and seasonally adjusted separately. No precise figures for adult school leavers are available, and the Department of Employment have estimates only from April 1974 onwards. Because of this limitation the analysis should be regarded as approximate and illustrative rather than definitive.

If we separate the adult school leavers from the rest of the males and females unemployment series defined in Section III, we produce four resultant series. Each of these has been further disaggregated nationally to give series for England, Scotland and Wales. The justification for this further split will be seen in subsequent sections of this article where the resulting twelve series are examined more closely.

Unemployed school leavers aged 18 and over

The six components of this series are plotted in Chart 6. The figures, which are not available prior to April 1974, are based on estimates of the 'adult school leavers' component of unemployment supplied by the Department of Employment, and have subsequently been substantially modified by the CSO to cope with discontinuities in the Professional and Executive Recruitment register in June 1977. As we are aware, the resulting series are of doubtful quality; however, for such an exercise as this we feel that strict accuracy in the division of the unemployed into school leavers and the remainder is slightly less critical if the two components are to be recombined after adjustment to form a seasonally adjusted total series. The shortness of the series also presents some difficulties, since there are relatively few observations from which to estimate the seasonal factors. However, it is only in recent years that the numbers of unemployed adult school leavers have become significant.

Chart 6 shows that the seasonal variation in the six unemployed adult school leavers series is proportional to the trend, but that there is quite a substantial amount of irregularity in the series. Because of this high level of irregularity it is worth considering the pseudo-additive method, which may be more robust than the multiplicative model in this situation. Besides choosing between the multiplicative and pseudo-additive models, it is also necessary to decide the length of moving average to be used in the estimation of the seasonal factors. By their dependence on the academic year these series are highly seasonal, but the seasonality tends to be unstable. This suggests that for both the multiplicative and pseudo-additive models, short seasonal factor moving averages would be appropriate, and analysis of X–11 runs using 3×3- and simple 3-term moving averages showed that for both models the 3-point moving average gave the smoother adjustment. We have used this option despite the dangers associated with such a short moving average discussed in Section II.

Chart 6 shows the seasonal adjustment obtained with the 3-point moving average using both multiplicative and pseudo-additive models for all six series. Neither model produces a very good adjustment: the reasons for this lie in the shortness of the series and the large amount of irregularity present. However, the adjustments for April 1976 produced for the two Scottish series are particular illustrations of the greater robustness of the pseudo-additive model, and for this general reason the pseudo-additive method has been adopted for all six adult school leavers series.

Unemployed excluding all school leavers

The six series of this type now available (split by sex and country) are shown in Chart 7. Although these plots only show the data from 1974 onwards, the total span used in the seasonal adjustment runs was from January 1964 to June 1978; in the absence of data prior to April 1974 we have assumed the number of unemployed adult school leavers to be negligible. To determine appropriate trend-seasonal models for these six series, amplitude-trend plots (not reproduced here) have been examined. They indicate additive seasonal behaviour for the three males series, and also for the females series for Scotland, but the plots for English and Welsh females still show some evidence of multiplicativity. When amplitude-trend plots are examined for each month separately, it becomes clear that the apparent multiplicativity is present in only some months of the year – most noticeably in January, May and June – and on balance we think that the additive model is the most appropriate for this series also. Further evidence in favour of additive seasonality was found by looking at the patterns of S-I differences for the six series.

The differences between the seasonal patterns of the six series are exhibited in Chart 8. These S-I differences were obtained in seasonal adjustment runs using additive models and standard X–11 options (except for the wider sigma limits). The solid line in Chart 8 shows the average S-I differences over the last three years (July 1975 to June 1978) for each month of the year for all six series, and the differences between the series are apparent. These dissimilarities are most noticeable in the differences between Scotland and the other countries in August and in the movements of all six series in October, November and December. Chart 8 also shows the corresponding average S-I differences over the first three years (1964–1966) of the data span used, which serve to give some idea of the changes in the seasonal patterns of all six series over the period 1964–1978. Several interesting features emerge.

First, the S-I differences for the months of July, August and September have, in general, moved closer to zero. Even with the exclusion of all school leavers the summer seasonal pattern is still changing, albeit to a lesser extent than before. This may be an indirect effect of the summer inflow of school leavers to the workforce, which creates more competition for the reduced number of jobs available in recent years and hence corresponding rises in unemployment generally in these summer months. Secondly, the S-I differences for the three females series in April and May (and also June for England and Wales) have become considerably more negative. A possible but very speculative explanation for this is that the recent boom in the tourist industry has created a significant increase in available employment, particularly for women. However, there may well be other explanations. A third feature of interest is the increase in the January S-I differences in the two series for England. This sharpening of the seasonal peak for January, particularly for the females series, was noted earlier in the discussion of the amplitude-trend plots for individual months.

The seasonally adjusted series obtained in X–11 runs using additive models and standard options (apart from the wider sigma limits) are shown in Chart 7. The summer humps observed in the seasonally adjusted series before the exclusion of the adult school leavers have largely disappeared, and this is confirmed by the S-I differences: the changes in the summer seasonal pattern have been greatly reduced, and the seasonal factors are now able to follow the pattern in July, August and September more closely.

In some other months of the year, however, the seasonal factors are still not following very well the changing pattern of the S–I differences. This is particularly the case for the three females series in May. To attempt to improve this situation we have looked at the seasonal adjustment of these series using 3×3-term seasonal factor moving averages. The results showed some improvement in the way the seasonal factors were tracking the changing seasonal pattern, but the effect of this improvement on the seasonally adjusted series was minimal. As a result we feel that the continuing use of the standard 3×5-term seasonal factor moving average is justified.

Unemployed excluding school leavers under 18

Chart 9 shows the seasonal adjustment obtained by summing the twelve seasonally adjusted components – six for adult school leavers and six excluding all school leavers – and compares the result, over the period 1975–78, with that obtained by summing the two seasonally adjusted series calculated in Section III (for males and females in Great Britain including adult school leavers). It is clear that whilst there is little difference in the seasonal adjustment obtained for 1975, that for 1976 and 1977 has been made smoother by the disaggregation of the series and separate seasonal adjustment of the adult school leavers using the pseudo-additive method; the humps obtained in the summers of 1976 and 1977 in the seasonal adjustment without disaggregation have been much reduced. It is also worth noting that the fall in the last few months of the series obtained without disaggregation starts later and is less steep in the disaggregated version. If the underlying trend of the series were to continue as at present we would expect a similar pattern to be repeated in 1978: the seasonally adjusted series obtained by the method of Section III would rise during the summer of 1978 and form another hump, whilst the seasonally adjusted series obtained by adjusting the components separately would rise less sharply, if at all.

The reason behind the improved adjustment becomes evident when we compare the pseudo-additively seasonally adjusted adult school leavers series (obtained by summing the six components) with the additive adjustment of the same series implied by the earlier method. The latter series is obtained by subtracting the sum of the six seasonally adjusted series excluding all school leavers from the sum of the two seasonally adjusted series obtained in Section III – it was noted in Section II that for adjustment using the same additive procedures (ignoring the effect of the extreme value procedure) the order of seasonally adjusting the component series and aggregating is immaterial. The comparison, together with the total unadjusted adult school leavers data for Great Britain, is given in Chart 10. Clearly the implied additive adjustment of the adult school leavers is unsatisfactory. The humps in the summers of 1976 and 1977 are very evident, and also there is over-adjustment in 1974.

Unemployed school leavers aged under 18

The White Paper on Unemployment Statistics (Cmnd 5157) published in November 1972 'strongly recommends' that as the best indicator of the trend in unemployment, the seasonally adjusted series excluding school leavers and adult students should be used. The term 'school leavers' refers here only to those aged under 18, as at the time the number of unemployed 'school leavers' aged 18 or over was not identified separately from the remainder of the total unemployed. However, both school leavers components have become much more significant in recent years, and it now seems pertinent to consider whether it is possible to construct a reasonable trend series for total unemployment including all school leavers, based on seasonally adjusting the three components (school leavers aged 18 or over, school leavers under 18 and the total excluding all school leavers) separately.

We have already mentioned in Section III that there are several difficulties associated with the series of unemployed school leavers aged under 18, which have up to now prevented their seasonal adjustment. The main difficulty is caused by the changing of the school leaving regulations to permit children of the right age to leave school at any time after the Spring Bank Holiday, rather than waiting until the end of the summer term. This change in the regulations came into force in 1976 in England and Wales, and 1977 in Scotland, and the resulting effect on the seasonal pattern of the unemployed school leavers under 18 was to increase the June and July seasonal factors, and to decrease those for August and September.

There are two ways of handling the situation when there is an abrupt change in the seasonal pattern: one is to seasonally adjust the two parts of the series separately, and the other is to prior adjust one part of the series to put it on the same seasonal basis as the other. In the case of the

unemployed school leavers under 18, there is obviously insufficient data after the change to carry out the first alternative, and so the six component series (split by sex and country) have been prior adjusted to put the summer months of all years before the change in the seasonal pattern onto the same seasonal basis as the years since. For each of the six series, we have done this by reassigning the numbers for the months of June to October for each year before the change in seasonal pattern in the same proportions as the average for the limited number of years after the change. We appreciate that this adjustment is arbitrary and rather crude, but we have not altered the data for the most recent years, and so we feel that the effect of the changes on the seasonally adjusted values of this most recent period will not be great. It is also reassuring to note that the seasonally adjusted series obtained using this prior adjustment is, for the earlier years, not very different from that obtained using the unmodified data.

Other difficulties inherent in the data are caused by the drop in the level of the series in 1973, caused by the raising of the school leaving age to 16, and the changing position of Easter with respect to the April unemployment count, which means that the April figures tend to be highly irregular. No attempt has been made to prior adjust the series to compensate for these problems, and this is certainly an area where further research might be useful.

The six components of the unemployed school leavers under 18 series are shown in Chart 11. Again, although data from 1974 only is shown we have used figures from 1964 onwards in our analysis. The series for England and Wales have similar seasonal patterns, as one would expect, since the same school leaving regulations apply to these two countries. In Scotland, however, school leaving is allowed at the end of the Christmas term, but not at Easter, and this results in a subsidiary seasonal peak in the two Scottish series in January. It is clear from Chart 11 that, as for the adult school leavers, the seasonal variation in the school leavers under 18 series is proportional to the trend level, again with some irregularity in the seasonal component.

Because of the sensitivity of the seasonality in these series to changes in the school leaving regulations, we again thought it prudent to consider the use of short seasonal factor moving averages. After some experimentation, 3-point moving averages were found to give smoother results than the other alternatives. Chart 11 compares the seasonally adjusted series obtained using 3-point seasonal factor moving averages with both the multiplicative and pseudo-additive models. The multiplicative model again appears not to perform as well as the pseudo-additive – April 1976 for the English and Welsh series is a typical instance of its less reliable behaviour – and so the pseudo-additive model has been adopted for all six series. Although the results are still rather irregular, it is clear that an approximate adjustment of these series is possible; however, the arbitrary nature of the prior adjustments makes it very doubtful whether such a series should be published until there is a sufficient run of data on a consistent basis.

Summary of component analyses

The seasonal adjustment runs described in this section are summarised in Chart 12. The five graphs displayed there show the original and seasonally adjusted versions of the school leavers aged 18 or over, school leavers under 18, total excluding all school leavers, total excluding school leavers under 18 and total including all school leavers. The last two series have been formed by summing the appropriate component series. We are now in a position to examine more closely the trends of these series; we feel that, despite the limitations already mentioned, the seasonal adjustments produced here are of sufficient quality to provide a basis for trend analysis.

It should be mentioned that there are other divisions of the series, not considered here, which might be equally beneficial to the seasonally adjusted series; those which come immediately to mind are analyses by type of last employment, by age, or by duration of unemployment, but this information is not collected monthly. We have in fact considered one further split – namely of the females unemployment series into single and married women. A look at amplitude-trend plots for these two resulting series reveals additive behaviour for the married women and a multiplicative model for single women. This reflects the absence of a significant number of school leavers in the married women series, since we can safely assume that the majority of females leaving full-time education are unmarried. As a result we feel that any differences in the seasonal patterns of married and single unemployed women will be adequately dealt with by removing the school leavers component from the total females series. In any case the proportion of married women in the total unemployed females series has remained fairly stable over the past decade. For these reasons we did not pursue this split of the female unemployed.

V Concluding discussion

Unemployment trends

This section presents estimates of the trend levels of some of the component series of unemployment in Great Britain. Only the final estimates of trend produced by the X-11 program are considered; these are calculated as Henderson weighted moving averages of the final seasonally adjusted series modified for extreme values. As was mentioned in Section II, the trend, seasonal and irregular components can only be defined in terms of the methods used for their estimation, so in this respect the choice of the X-11 based Henderson trend is arbitrary. Alternative definitions and methods of estimating trends are the subject of a separate project currently being undertaken in Research Branch; some preliminary ideas and results are given by Morris and Webb (1978).

The unemployment total for Great Britain has been subdivided into school leavers aged under 18, school leavers 18 and over, the total excluding all school leavers and the total excluding only school leavers under 18; Chart 13 shows graphs of the unadjusted original figures and their corresponding estimates of trend. These sub-totals and totals have been obtained by aggregating the appropriate groups of the eighteen component series analysed in the

previous section. Noteworthy features of the recent trends in total unemployment for Great Britain are the significant slowing down in the rate of increase in early 1976 and the small downward movement from the beginning of 1978 – the decrease being concentrated in the series excluding all school leavers, with an essentually flat trend for school leavers. The actual values of these five trend series, for April 1974 onwards, are shown in Table 1; also given, in *brackets*, are the relative contributions of the components (columns 1 to 3) to the total (column 5).

Chart 14 shows graphs corresponding to two other breakdowns of the total trend estimates for Great Britain, namely by sex and by country. The first breakdown shows that, over the period April 1974 to June 1978, the proportion of females in the total has almost doubled from 16 per cent to 29 per cent. The breakdown by country is interesting because the trends for the countries separately have remained in almost constant relative proportions over the period.

It is important to make certain qualifications regarding the methods and data used in the analyses presented in this article. The choice of methods has been largely determined by the emphasis on producing the best possible estimates of the latest trends in unemployment, not with a view to producing and publishing seasonally adjusted values on a regular basis. Thus we have not considered problems such as the quality of year-ahead seasonal factors or difficulties arising from abrupt changes in the seasonal pattern. Of course, all commitments to publish regularly seasonally adjusted series risk the latter. In particular, for the seasonal adjustment of school leavers aged under 18, if the school leaving regulations were changed again it would be impossible to assess the corresponding change in the seasonality of the series with any degree of confidence until some time afterwards. On the question of data, it should be repeated that the adult school leavers figures are of a lower quality than is normal for unemployment series published by the Department of Employment.

General considerations

Some important general issues in trend and seasonal analysis have been raised by this work on unemployment, and we focus attention on two in particular that will benefit from wider discussion.

The first point concerns the frequency of updating of analyses of trend and seasonality. Usually, Goverment Statistical Service practice is to update seasonal analyses once a year; in our previous terminology, this is the 'operational' mode of analysis. Provided there are no revisions to the basic data, the 'operational' mode ensures that there are no revisions to the seasonally adjusted series between annual updates, thus keeping to a minimum the costs of production and publication. However, the revisions that occur on the annual update can sometimes be quite large, and because seasonal patterns are always changing to some extent, better estimates of trend and seasonal components can often be obtained by re-analysing as each new observation becomes available. Termed the 'up-to-date' mode, this entails regular, mostly minor, revisions to previous estimates of both trend and seasonal components. Clearly the 'up-to-date' mode of analysis is more expensive in resources than the commonly used 'operational' mode. With the increasing use of computers the problem with the 'up-to-date' method of working is not so much in producing the analyses as in publishing all the attendant revisions to the seasonally adjusted series. A review of policy on the frequency of updating trend-seasonal analyses would have to balance improved quality of estimates against increased costs of production and publication and – perhaps more important – the possible confusion caused by frequent revisions.

The second issue concerns the publication of trend estimates for important series. Recalling that trend-seasonal analyses are for the purpose of assessing underlying movements, the problem with seasonally adjusted values is that, by definition, they retain the irregularity inherent in the original series. Often users need to smooth the seasonally adjusted series, for example by means of 3-month averaging, to help clarify the underlying movements, and it is open to debate whether it would be useful to publish estimates of trend as well as seasonally adjusted values. On the particular question of estimating the trends of the most recent observations, the current Research Branch project on trend estimation referred to earlier and the practical experience gained from this present study of unemployment have shown that better estimates are obtained by using the 'up-to-date' mode of analysis. Thus the option of publishing trend estimates is closely linked to the frequency of analysis question raised above. These general issues will be more fully discussed elsewhere, particularly in the context of the trend estimation project.

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CHART 1

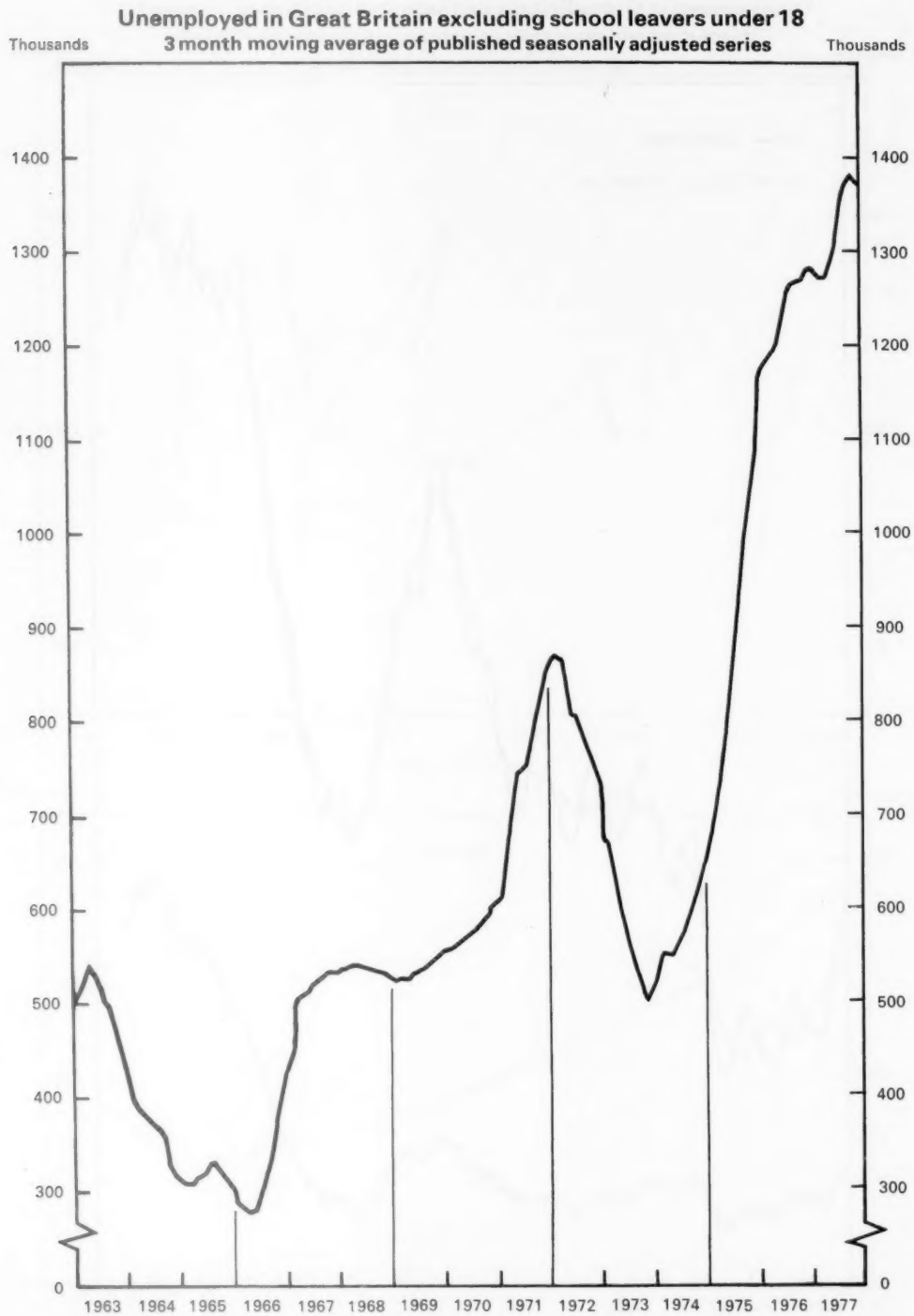

Unemployed in Great Britain excluding school leavers under 18
3 month moving average of published seasonally adjusted series
Thousands
Thousands
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
0
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977

CHART 2

Unemployed in Great Britain excluding school leavers under 18

Unadjusted and seasonally adjusted using standard 3 x 5-term seasonal factor moving averages

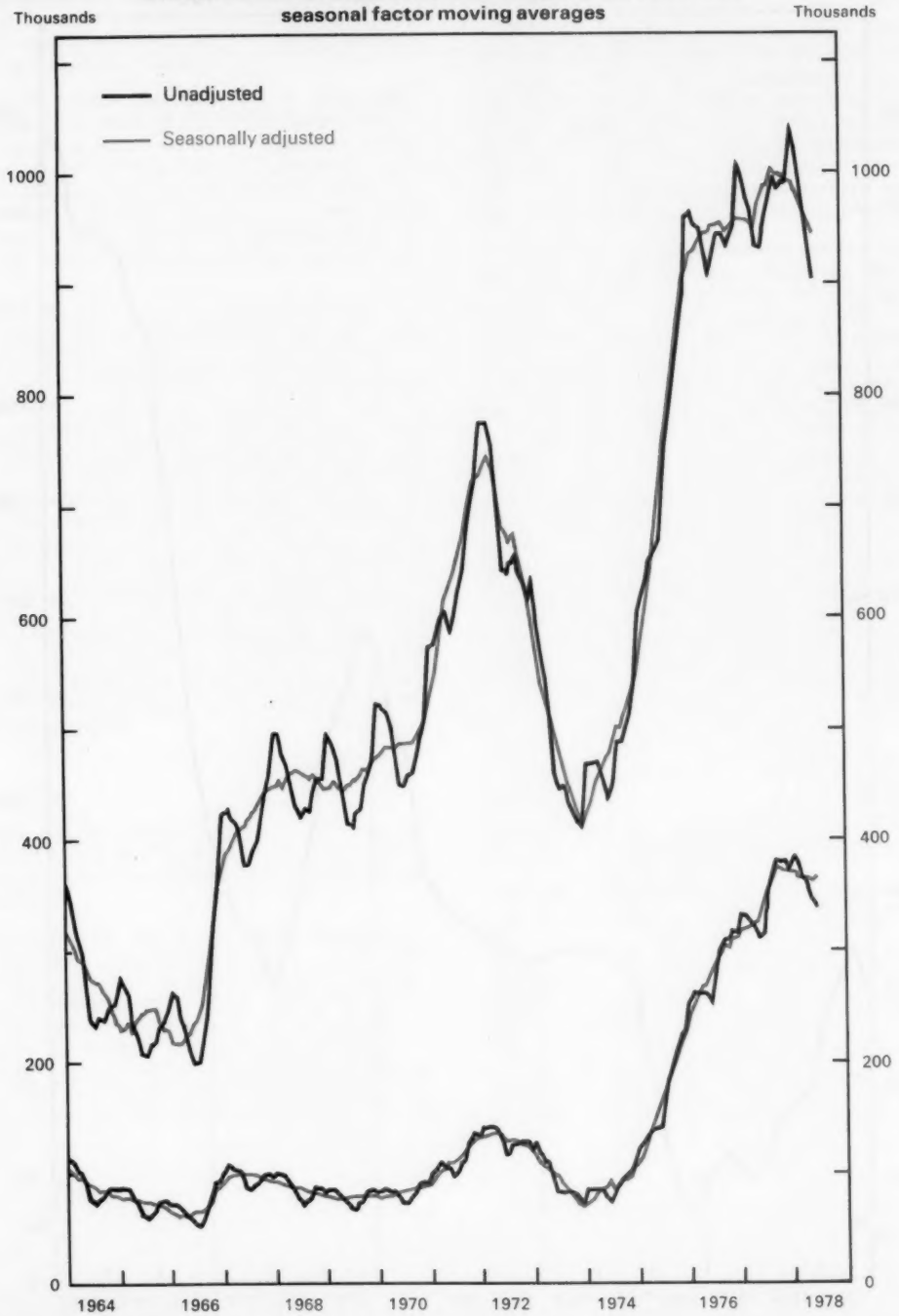


CHART 3

Unemployed in Great Britain excluding school leavers under 18

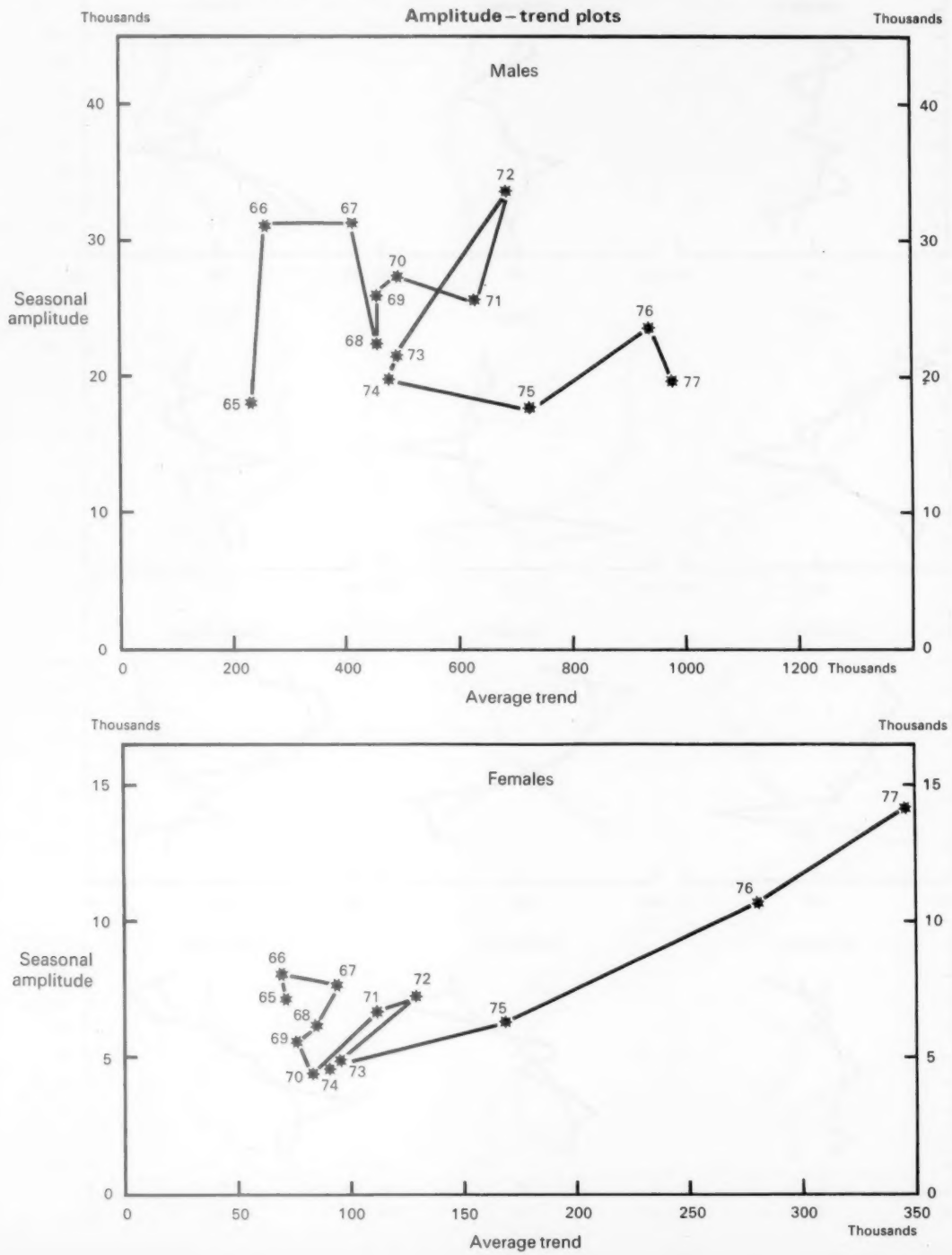


CHART 4A **Changing seasonal patterns in total unemployed in Great Britain excluding school leavers under 18: males**

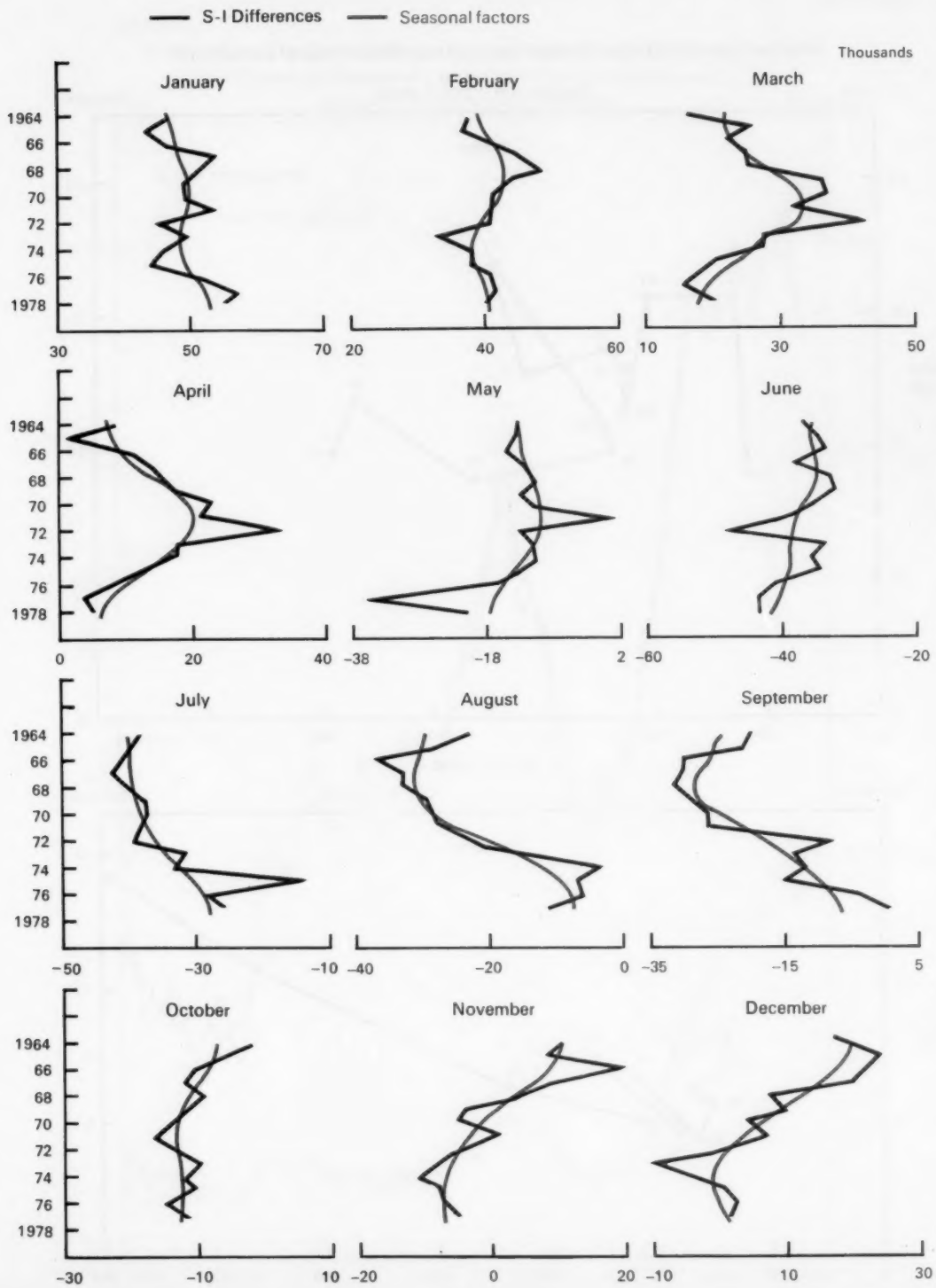


CHART 4B **Changing seasonal patterns in total unemployed in Great Britain excluding school leavers under 18: females**

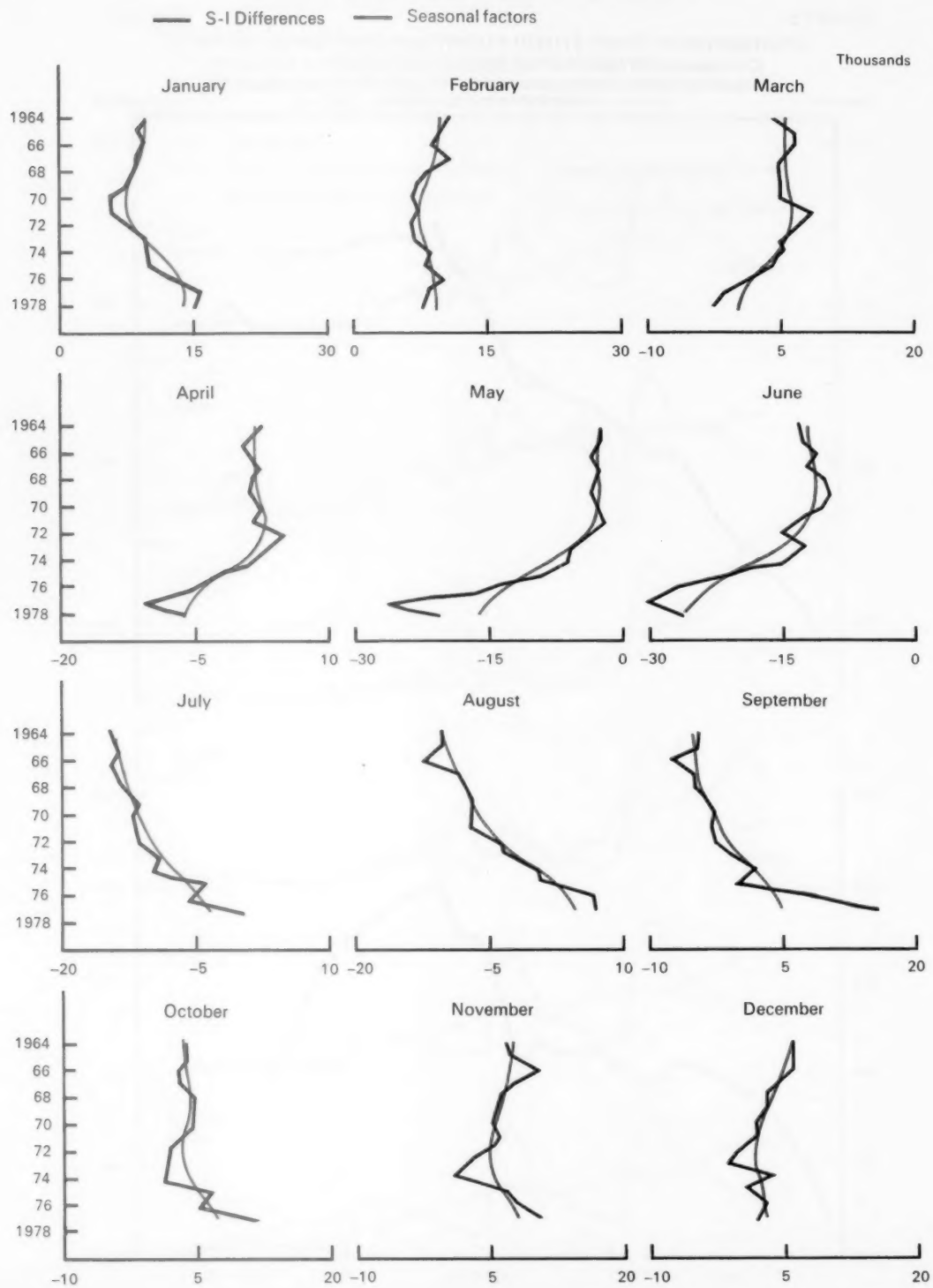


CHART 5

Unemployed in Great Britain excluding school leavers under 18

Comparison of seasonal adjustment using standard 3 x 5-term seasonal factor moving averages and using 3 x 3-term seasonal factor moving averages

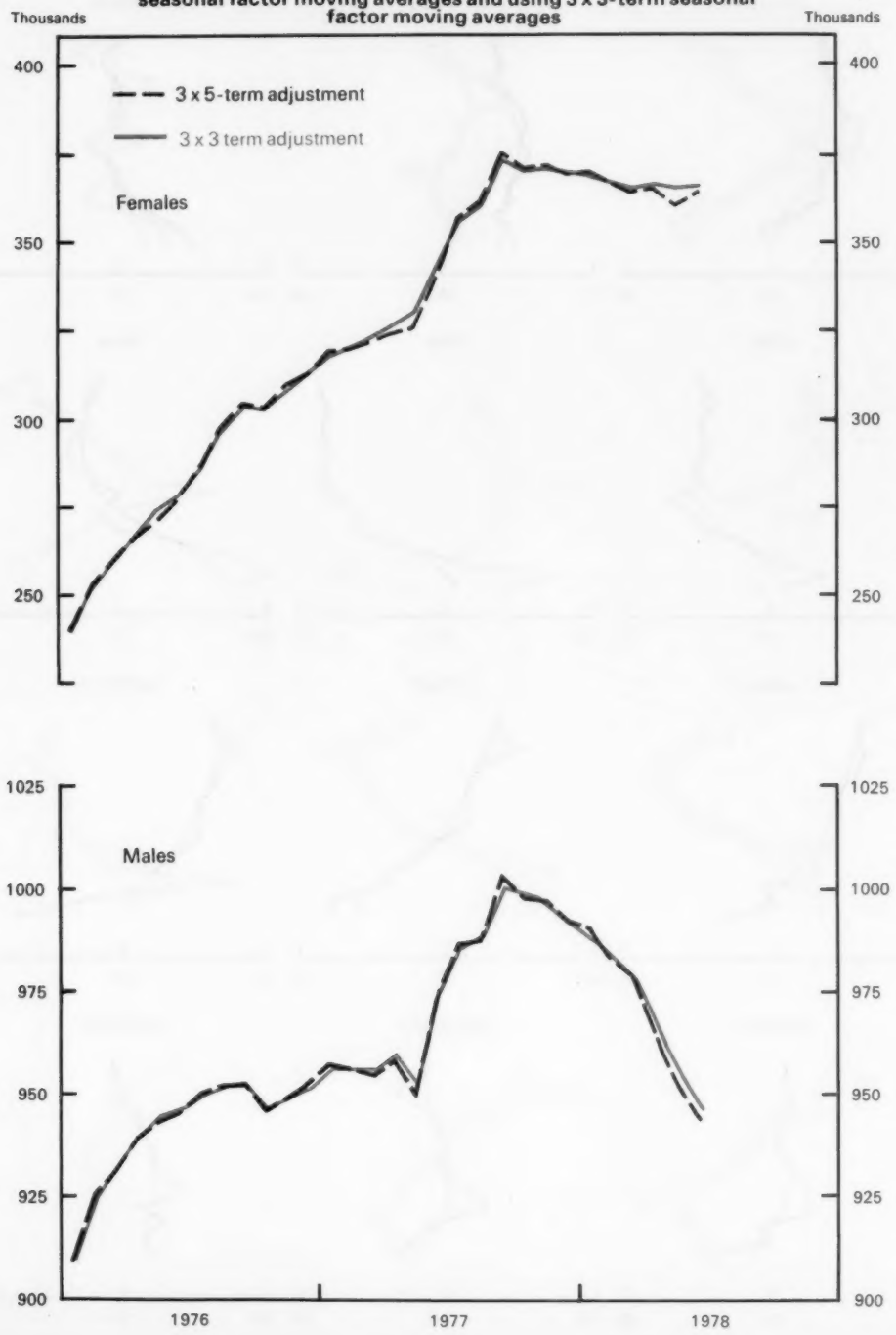


CHART 6

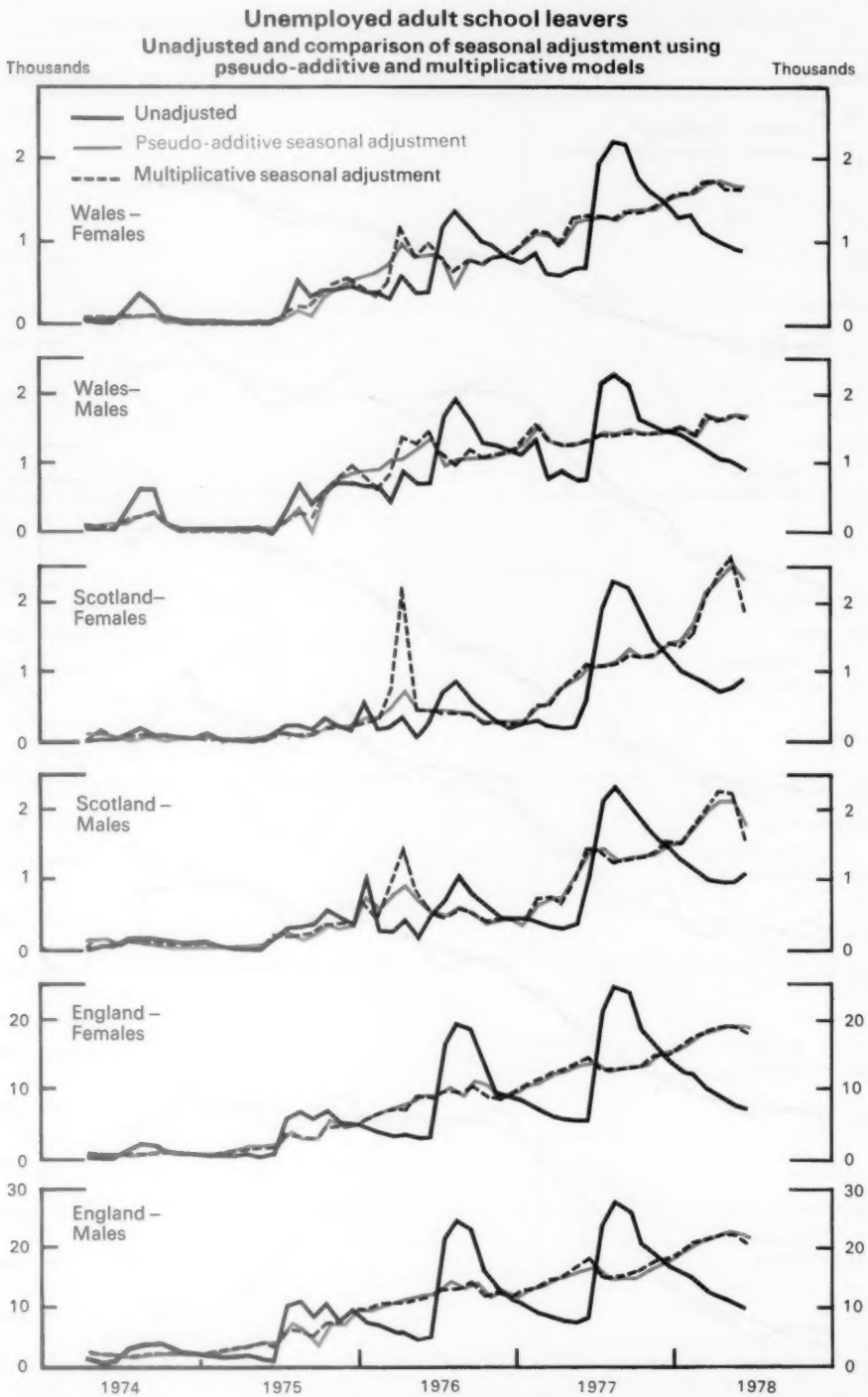

Unemployed adult school leavers
Unadjusted and comparison of seasonal adjustment using pseudo-additive and multiplicative models
Thousands
Thousands
Unadjusted
Pseudo-additive seasonal adjustment
Multiplicative seasonal adjustment
Wales – Females
Wales – Males
Scotland – Females
Scotland – Males
England – Females
England – Males
1974
1975
1976
1977
1978

CHART 7

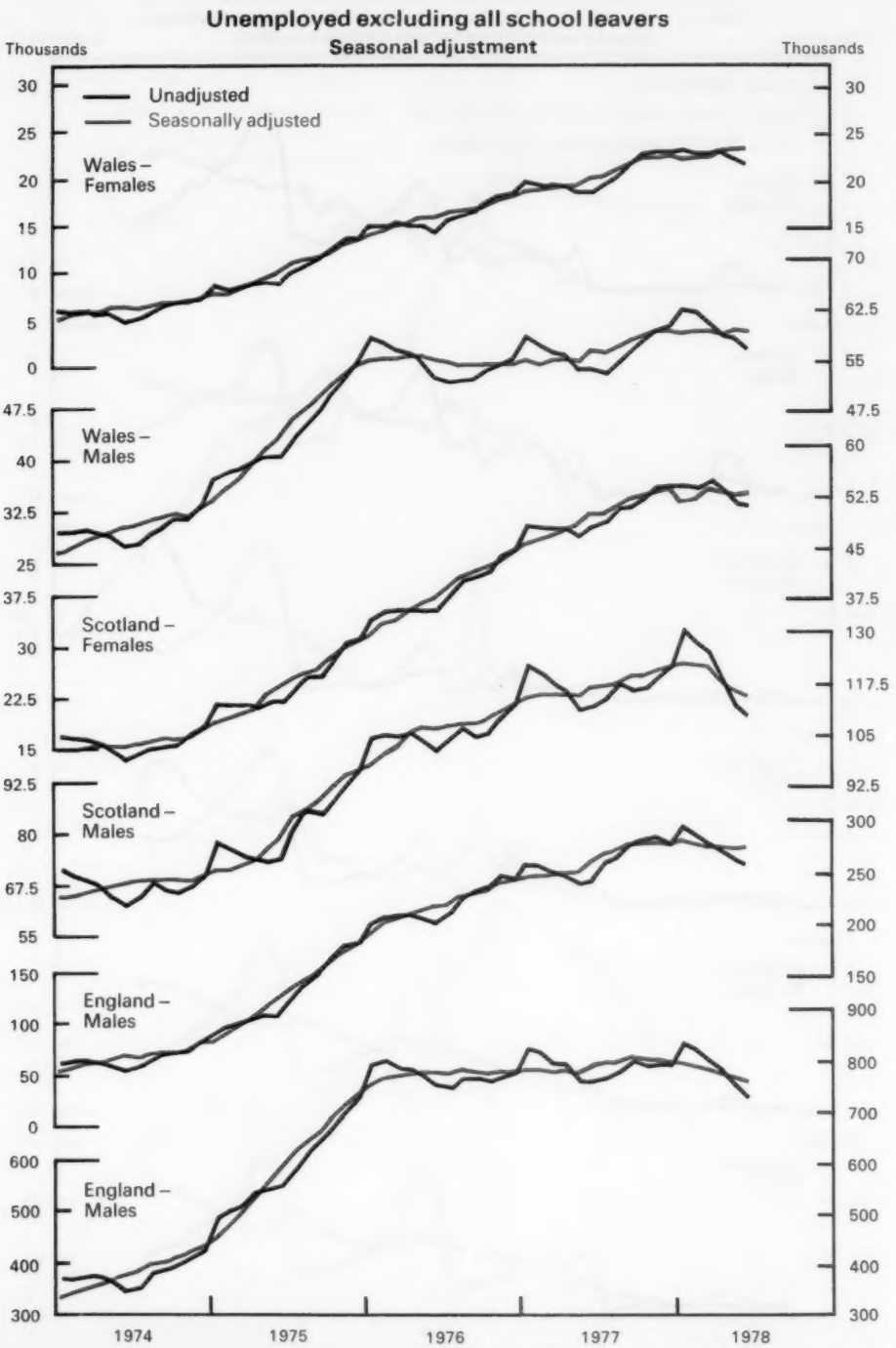

Unemployed excluding all school leavers
Seasonal adjustment
Thousands
Thousands
Unadjusted
Seasonally adjusted
Wales – Females
Wales – Males
Scotland – Females
Scotland – Males
England – Males
England – Males
30
25
20
15
10
5
0
47.5
40
32.5
25
37.5
30
22.5
15
92.5
80
67.5
55
150
100
50
0
600
500
400
300
70
62.5
55
47.5
60
52.5
45
37.5
130
117.5
105
92.5
300
250
200
150
900
800
700
600
500
400
300
1974
1975
1976
1977
1978

CHART 8

Seasonal variation in total unemployed excluding all school leavers

Average S-I Difference over period 1964–66

Average S-I Difference over period July 1975–June 1978

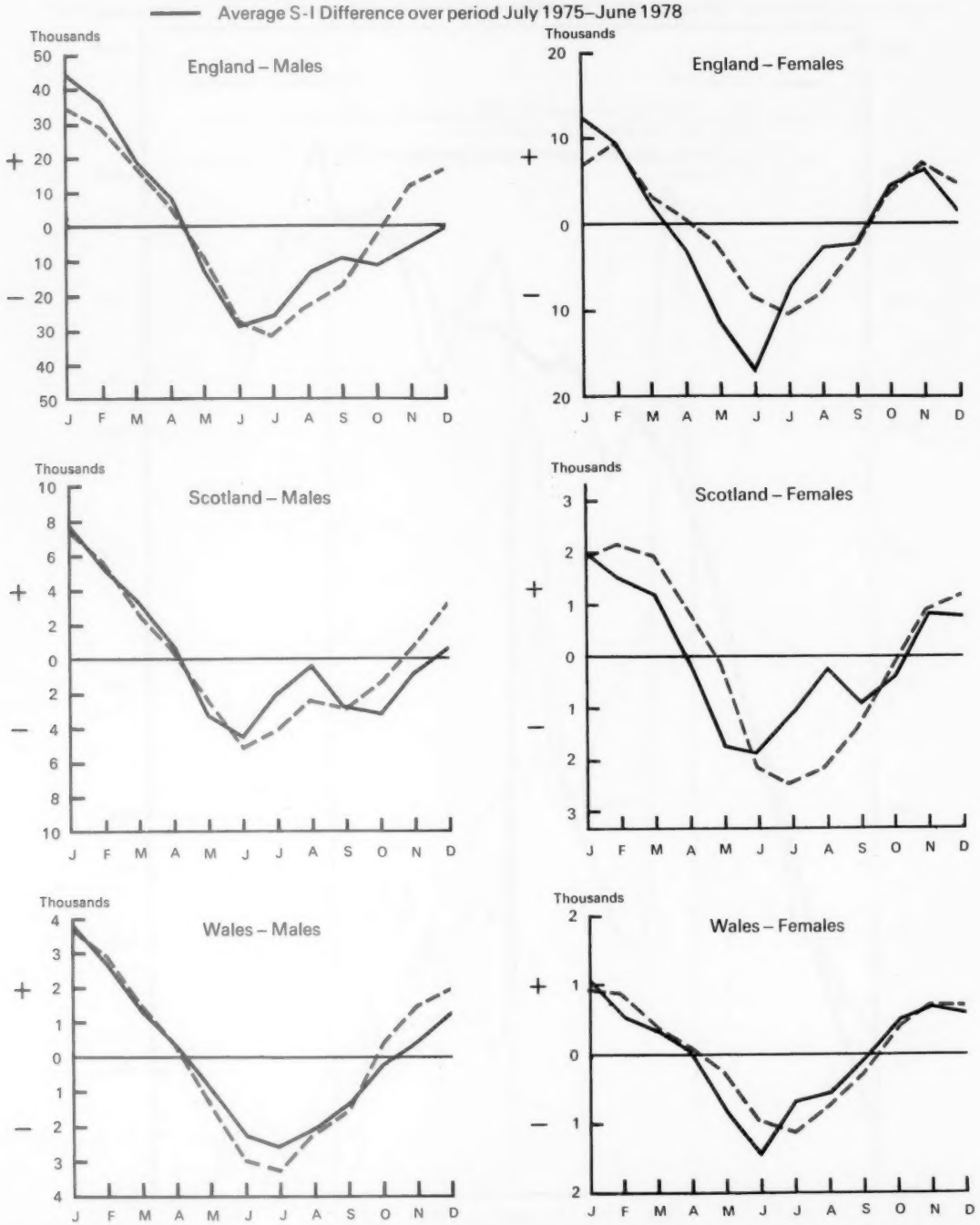


CHART 9

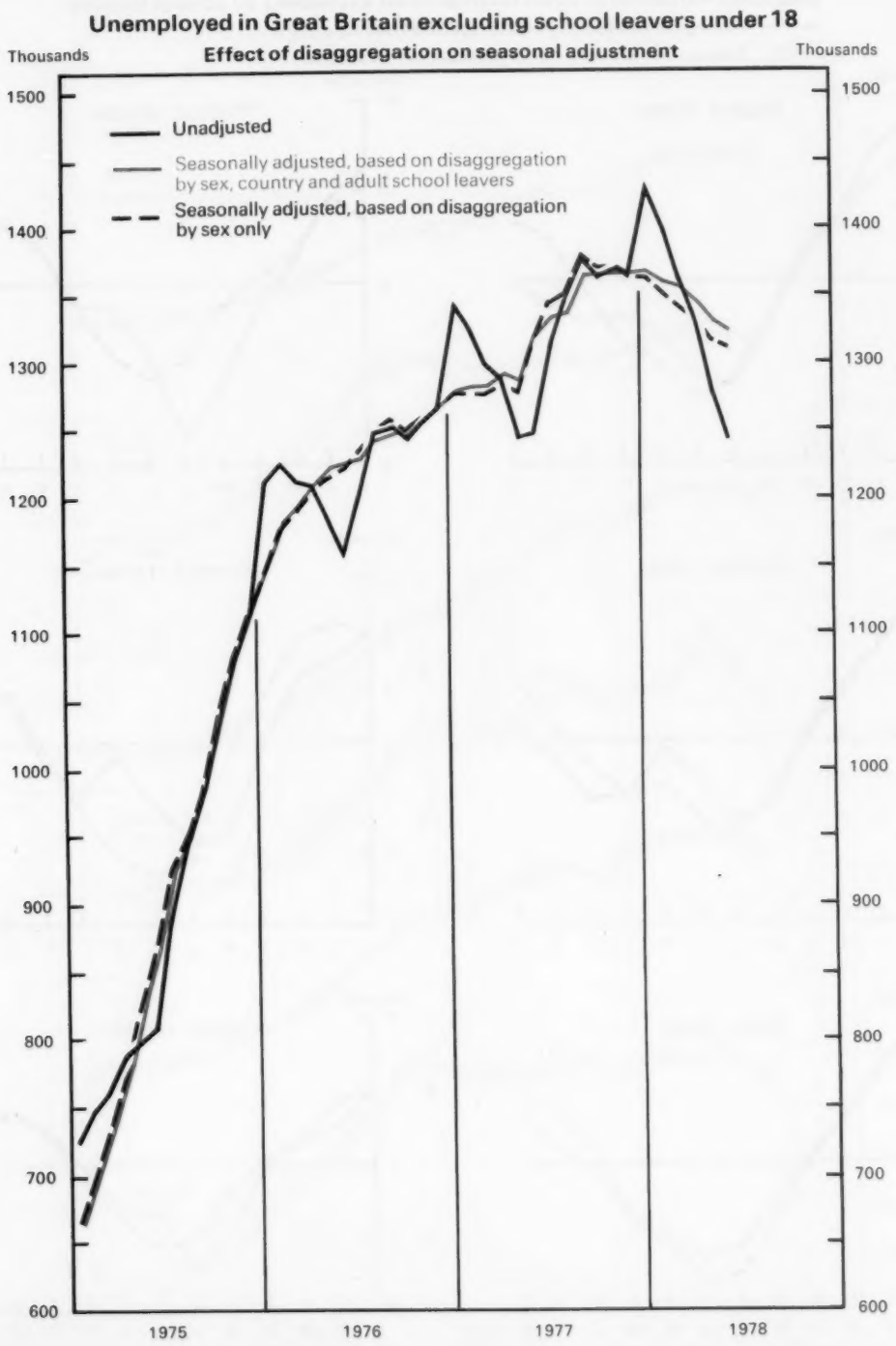

Unemployed in Great Britain excluding school leavers under 18
Effect of disaggregation on seasonal adjustment
Thousands
Thousands
Unadjusted
Seasonally adjusted, based on disaggregation by sex, country and adult school leavers
Seasonally adjusted, based on disaggregation by sex only
1500
1400
1300
1200
1100
1000
900
800
700
600
1975
1976
1977
1978

CHART 10

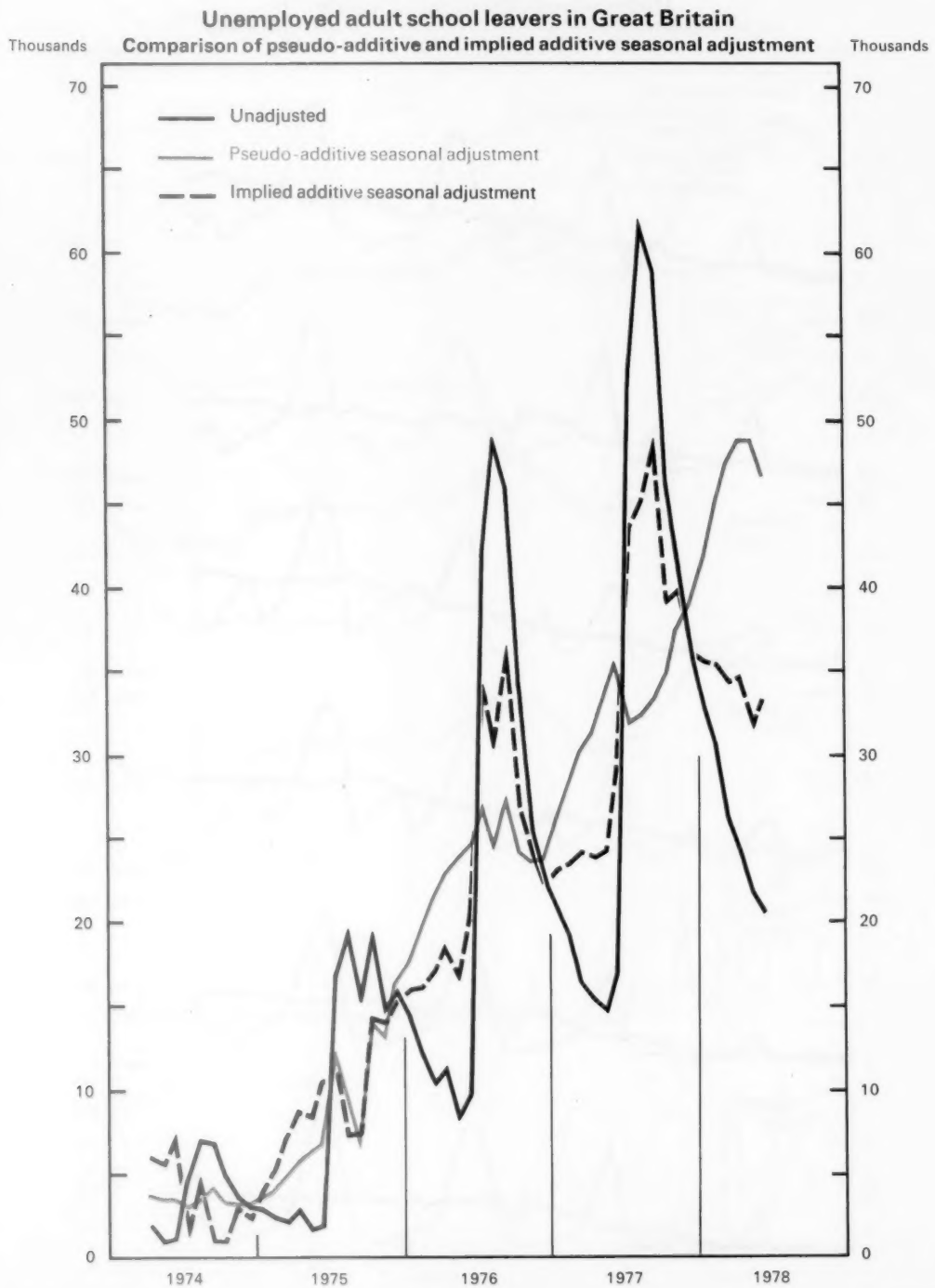

Unemployed adult school leavers in Great Britain
Comparison of pseudo-additive and implied additive seasonal adjustment
Thousands
Thousands
Unadjusted
Pseudo-additive seasonal adjustment
Implied additive seasonal adjustment
70
60
50
40
30
20
10
0
1974
1975
1976
1977
1978

CHART 11

Unemployed school leavers under 18
Unadjusted and comparison of seasonal adjustment using pseudo-additive and multiplicative models

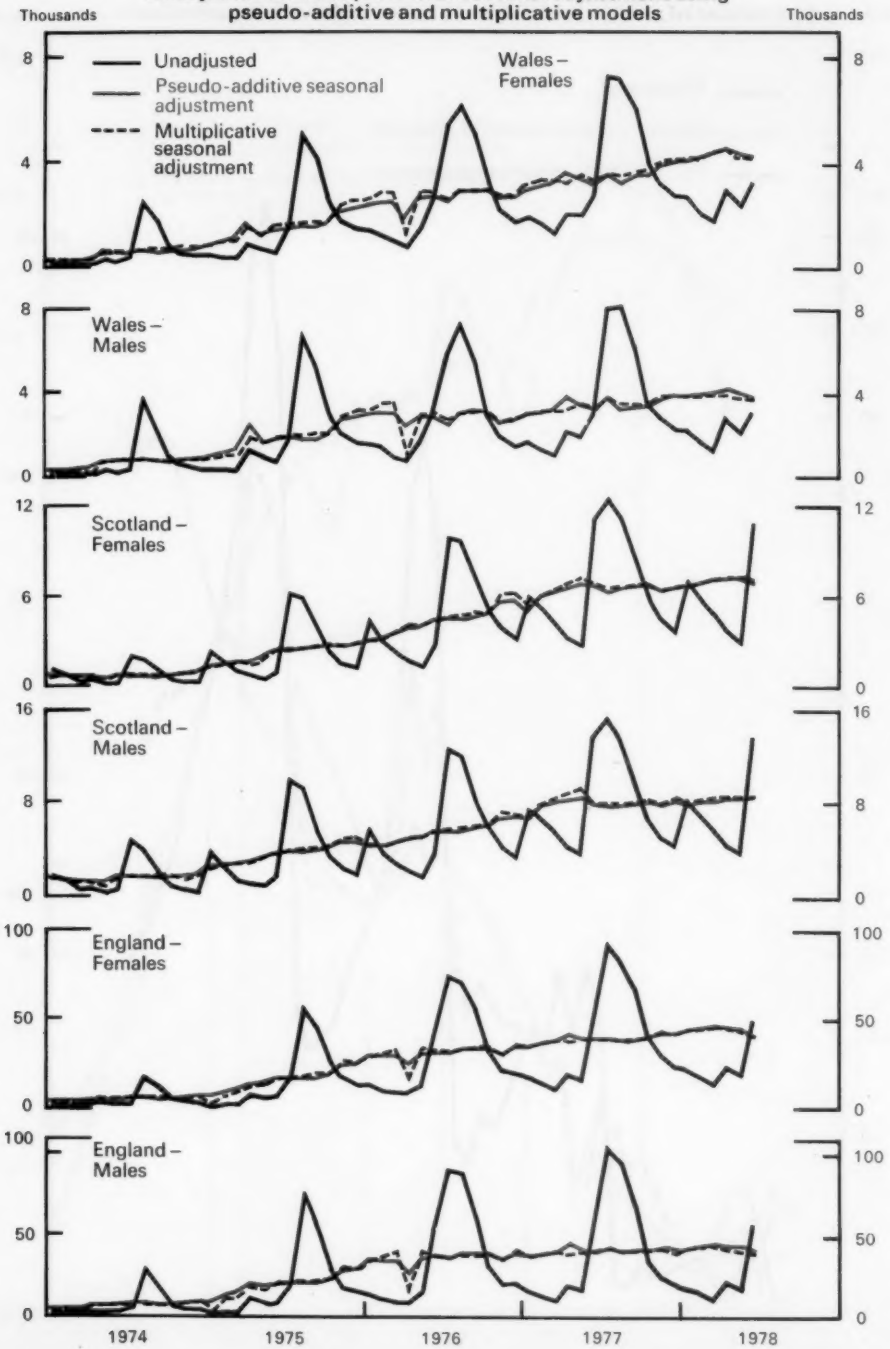


CHART 12

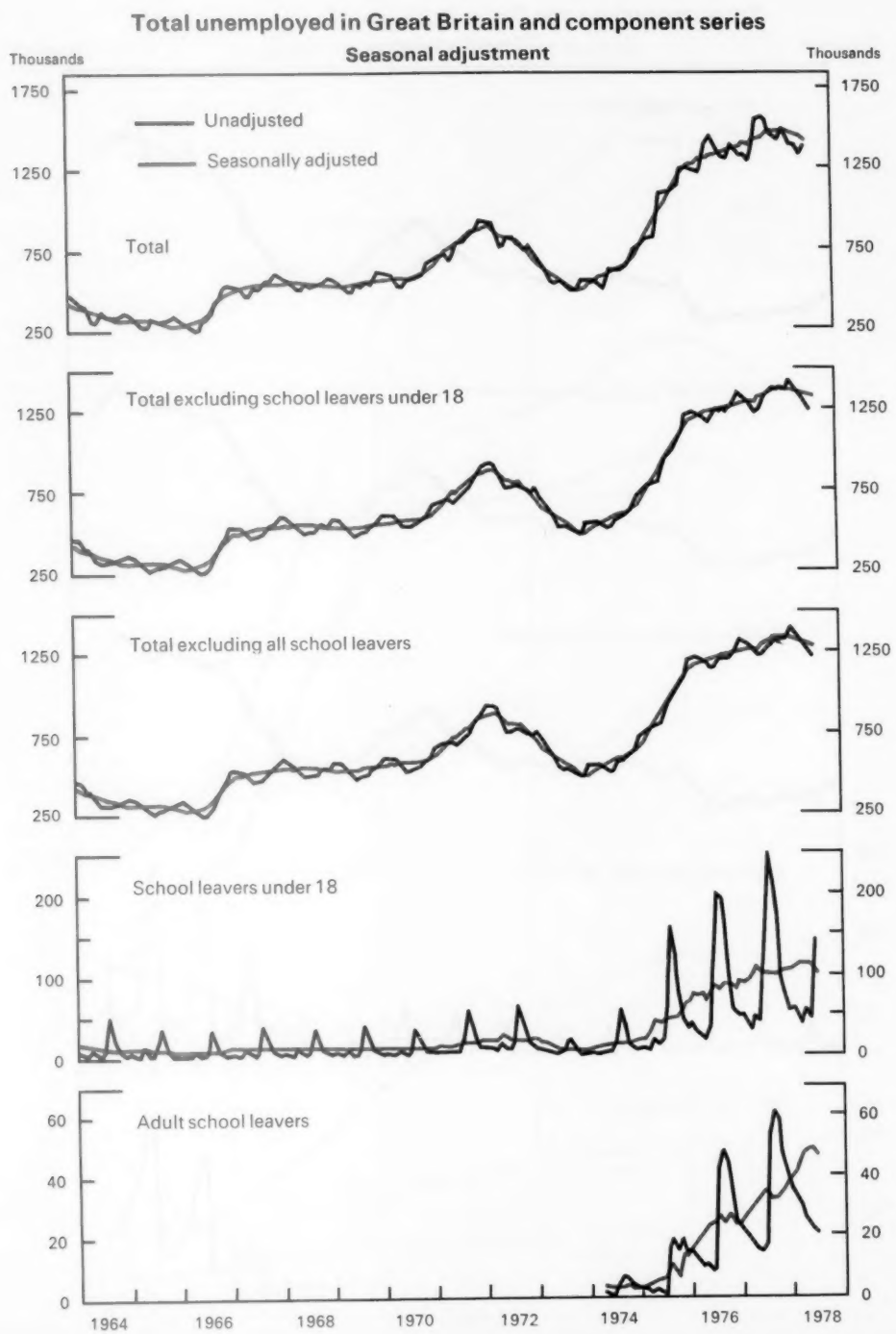

Total unemployed in Great Britain and component series
Seasonal adjustment
Thousands
Thousands
Unadjusted
Seasonally adjusted
Total
Total excluding school leavers under 18
Total excluding all school leavers
School leavers under 18
Adult school leavers
1750
1250
750
250
200
100
0
60
40
20
1964
1966
1968
1970
1972
1974
1976
1978

CHART 13

Total unemployed in Great Britain and component series

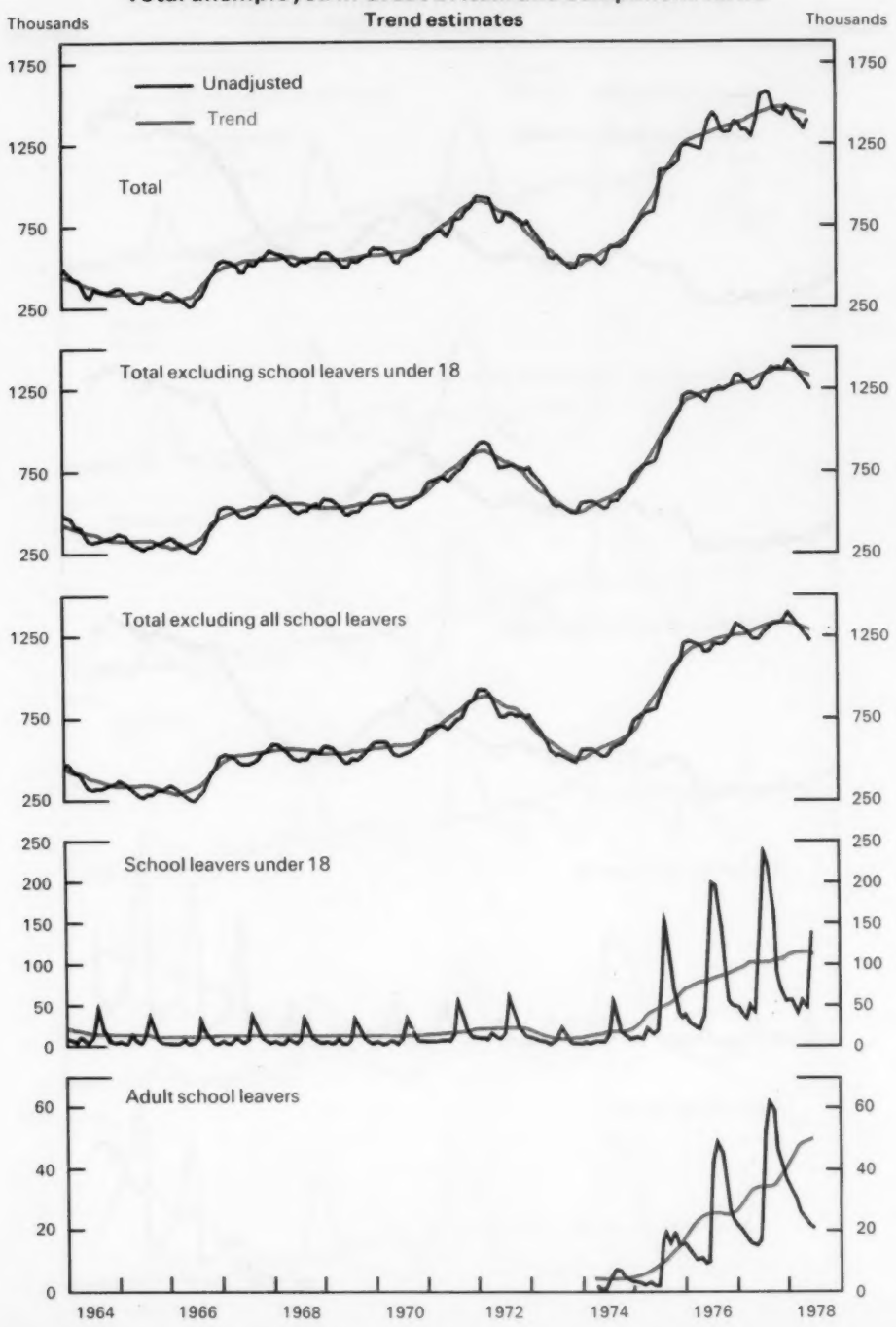
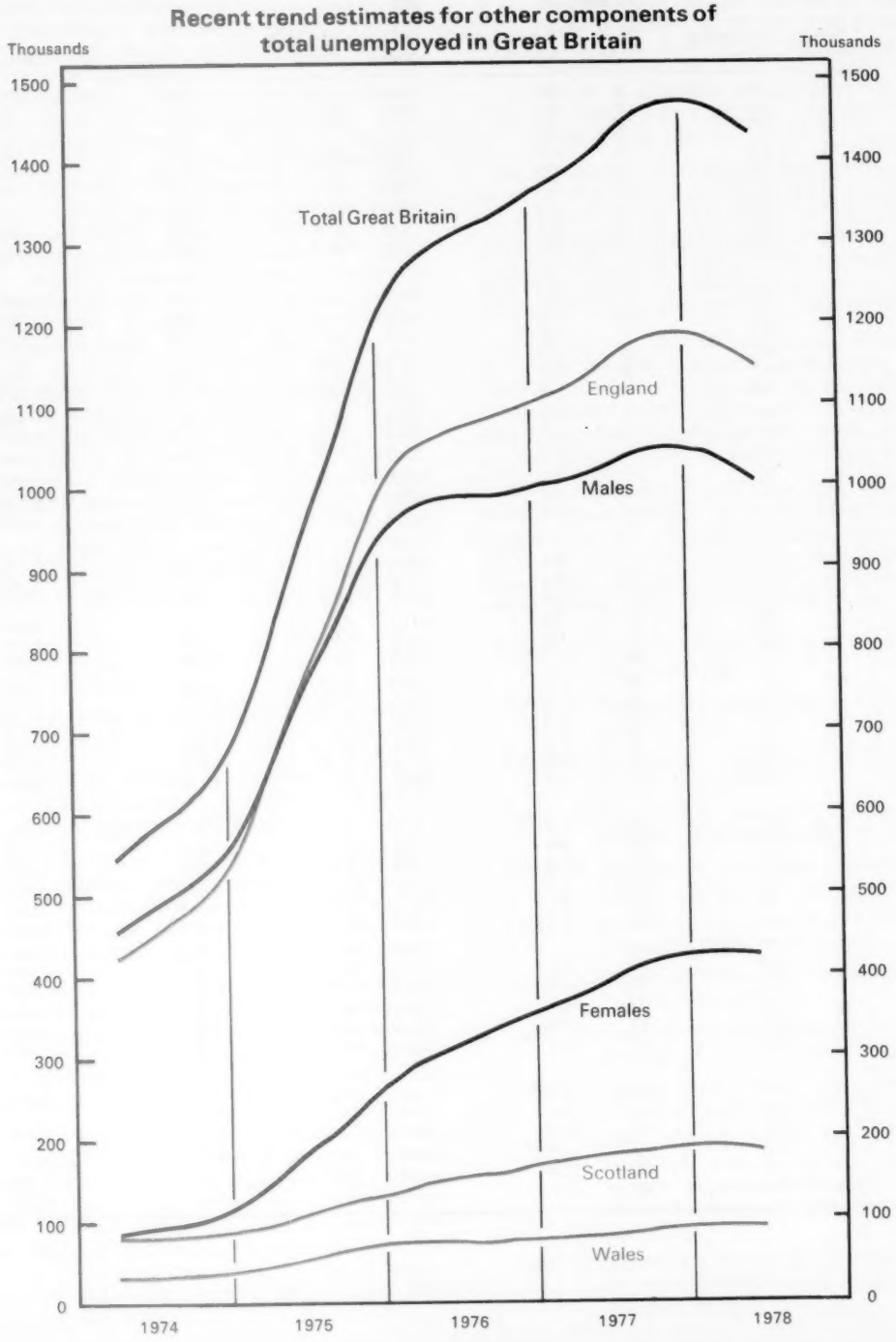


CHART 14


Recent trend estimates for other components of total unemployed in Great Britain
Thousands
Thousands
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
Total Great Britain
England
Males
Females
Scotland
Wales
1974
1975
1976
1977
1978

Trend estimates for total unemployment and its components

TABLE 1

		(1) School leavers aged under 18		(2) School leavers aged 18 and over		(3) Total excl. all school leavers		(4) Total excl. school leavers under 18 (2) + (3)	(5) Total incl. all school leavers (1) + (2) + (3)
		Thousands	Percentage of total	Thousands	Percentage of total	Thousands	Percentage of total	Thousands	Thousands
1974	*A*	11	*2·0*	3	*0·6*	534	*97·4*	537	548
	M	12	*2·2*	3	*0·6*	546	*97·2*	549	561
	J	13	*2·2*	3	*0·6*	558	*97·2*	561	574
	J	13	*2·2*	3	*0·6*	570	*97·2*	573	586
	A	13	*2·2*	3	*0·5*	582	*97·3*	585	598
	S	13	*2·2*	3	*0·5*	593	*97·3*	596	609
	O	14	*2·2*	3	*0·5*	605	*97·3*	608	622
	N	15	*2·4*	3	*0·5*	619	*97·1*	622	638
	D	18	*2·7*	3	*0·5*	638	*96·8*	642	660
1975	*J*	22	*3·1*	4	*0·5*	664	*96·3*	667	689
	F	26	*3·6*	4	*0·6*	694	*95·8*	698	725
	M	31	*4·1*	5	*0·6*	730	*95·3*	735	766
	A	37	*4·5*	6	*0·7*	771	*94·8*	777	813
	M	41	*4·7*	6	*0·7*	816	*94·5*	822	863
	J	44	*4·8*	7	*0·8*	861	*94·4*	868	912
	J	46	*4·8*	8	*0·9*	904	*94·4*	912	958
	A	48	*4·8*	9	*0·9*	944	*94·3*	954	1,002
	S	50	*4·8*	11	*1·0*	985	*94·2*	995	1,046
	O	55	*5·0*	12	*1·1*	1,025	*93·9*	1,037	1,092
	N	59	*5·2*	14	*1·2*	1,066	*93·6*	1,080	1,139
	D	64	*5·4*	16	*1·3*	1,103	*93·2*	1,119	1,183
1976	*J*	68	*5·6*	18	*1·4*	1,134	*93·0*	1,152	1,220
	F	72	*5·7*	19	*1·5*	1,158	*92·7*	1,177	1,249
	M	73	*5·8*	21	*1·6*	1,175	*92·6*	1,196	1,270
	A	75	*5·8*	22	*1·8*	1,187	*92·4*	1,210	1,284
	M	76	*5·9*	24	*1·8*	1,195	*92·3*	1,219	1,295
	J	78	*6·0*	24	*1·8*	1,202	*92·2*	1,226	1,304
	J	80	*6·1*	24	*1·8*	1,208	*92·0*	1,232	1,312
	A	82	*6·2*	24	*1·8*	1,214	*91·9*	1,238	1,320
	S	84	*6·3*	24	*1·8*	1,219	*91·9*	1,243	1,327
	O	85	*6·3*	24	*1·8*	1,226	*91·9*	1,250	1,335
	N	86	*6·4*	24	*1·8*	1,234	*91·8*	1,258	1,344
	D	88	*6·5*	25	*1·8*	1,243	*91·7*	1,267	1,355
1977	*J*	91	*6·7*	26	*1·9*	1,249	*91·4*	1,275	1,366
	F	94	*6·8*	28	*2·0*	1,253	*91·1*	1,280	1,375
	M	97	*7·0*	30	*2·2*	1,255	*90·8*	1,285	1,382
	A	99	*7·1*	32	*2·3*	1,261	*90·6*	1,292	1,392
	M	100	*7·2*	33	*2·3*	1,270	*90·5*	1,303	1,403
	J	100	*7·1*	33	*2·4*	1,283	*90·6*	1,316	1,417
	J	100	*7·0*	33	*2·3*	1,298	*90·7*	1,331	1,431
	A	100	*6·9*	34	*2·3*	1,312	*90·8*	1,345	1,445
	S	100	*6·9*	34	*2·3*	1,323	*90·8*	1,357	1,457
	O	101	*6·9*	35	*2·4*	1,329	*90·7*	1,364	1,465
	N	103	*7·0*	37	*2·5*	1,330	*90·5*	1,367	1,471
	D	106	*7·2*	39	*2·7*	1,328	*90·1*	1,367	1,473
1978	*J*	109	*7·4*	42	*2·9*	1,323	*89·8*	1,365	1,474
	F	111	*7·5*	45	*3·0*	1,316	*89·4*	1,361	1,471
	M	111	*7·6*	47	*3·2*	1,306	*89·2*	1,353	1,465
	A	111	*7·6*	48	*3·3*	1,296	*89·1*	1,344	1,455
	M	110	*7·6*	49	*3·4*	1,286	*89·0*	1,334	1,444
	J	109	*7·6*	49	*3·4*	1,275	*89·0*	1,324	1,433

APPENDIX

Moving average methods

The essential feature of moving average methods of trend-seasonal analysis is that the components of the given model are estimated iteratively using moving averages. The usual first step is to form a preliminary estimate of the trend. The moving average chosen for this purpose has to work tolerably well in the presence of annual seasonal behaviour; especially around cyclical turning points in the original series it can be difficult to distinguish between trend and seasonal movements. Removing this first estimate of trend from the original leaves an estimate of the combined seasonal-irregular component. This estimate is usually called the S–I ratio if the trend is removed by division (as is the case for a multiplicative model), or the S-I difference if it is removed by subtraction (for an additive model). The first estimate of the seasonal component for each month is derived by averaging the S-Is for that month, and an estimate of the seasonally adjusted series is then obtained by removing these estimated seasonal effects from the original series. An improved trend estimate can now be obtained by smoothing the estimated seasonally adjusted series. (Note that the moving average used for this second trend estimate does not have to be designed to eliminate seasonality.) The process for estimating the components continues iteratively. At various stages in the process the irregular component is estimated (by removing an estimate of the seasonal or the trend from the series of S-Is or the seasonally adjusted series, respectively) and extreme irregular movements are identified and modified, so permitting improved estimates of the trend and seasonal components.

General organisation of X-11

X-11 is divided into seven parts, identified by the letters A to G. The estimation of the components and the extreme value operations are all carried out in parts B, C and D: part A is concerned with reading in parameters and data and applying any prior adjustments, and parts E, F and G are all concerned with supplementary output.

Parts B, C and D have a common pattern, and each is in effect a complete moving average seasonal adjustment. Their functions in the complete scheme can be described as follows, where we use the term 'original series' to mean the series after any prior adjustments in part A.

(*a*) Part B estimates the seasonal factors from the original series, and uses these factors to seasonally adjust the original series. The irregular component of this seasonally adjusted series is analysed for extremes, and an extreme-modified version of the original series is constructed.

(*b*) Part C estimates the seasonal factors from the extreme-modified series produced by part B, and uses these factors to seasonally adjust the original series. Again the irregular component is analysed for extremes, and the results are used to modify the extremes in the original series. Note that the program reverts to the original series for this modification; it is not a second modification of the modified series produced by part B.

(*c*) Part D estimates the seasonal factors from the extreme-modified series produced by part C, and applies these factors to the original series. The result is defined to be the final seasonally adjusted series. The final trend, however, is obtained by smoothing a modified seasonally adjusted series, which is obtained by applying the final part D seasonal factors to the modified original series produced by part C.

For simplicity, the foregoing description has ignored the question of trading-day adjustments. If these adjustments are required, the factors are estimated from a regression of the estimated irregular on the number of occurrences of each day of the week; two estimates are made, a preliminary one based on the irregular at the end of part B, and a final one based on the irregular at the end of part C.

It can be seen that, although parts B and C each carry out a full seasonal adjustment in the same way as part D, the sole purpose of doing so is to obtain better estimates of the extreme value weights (and the trading-day factors). Apart from these results, the calculations of parts B and C are completely discarded when part D is entered.

The common pattern of parts B, C and D is now described. The operations are described in terms of the table numbers, which are used in nearly identical ways in all parts (e.g. the input series are tables B1, C1, and D1 respectively). Tables 4 and 9 do not exist in all the parts, and so are excluded from the common pattern.

Table 1: Input series to this part (not necessarily the original series).

Table 2: Preliminary trend estimate: 12×2 moving average of table 1.

Table 3: Preliminary seasonal-irregular: remove table 2 trend from table 1.

Table 5: Preliminary seasonal factors: 3×3 moving average of corresponding months in table 3.

Table 6: Preliminary seasonally-adjusted series: remove table 5 seasonal factors from table 1.

Table 7: Second trend estimate: Henderson weighted moving average of table 6.

Table 8: Second seasonal-irregular estimate: remove table 7 trend from table 1.

Table 10: Second seasonal factor estimate: 3×5 moving average of corresponding months in table 8.

Table 11: Second seasonally-adjusted series: remove table 10 seasonal factors from original series.

Table 12: (Part D only). Third trend estimate: Henderson weighted moving average of modified seasonally adjusted series obtained by removing table 10 seasonal factors from the table 1 modified series.

Table 13: Estimate of irregular: remove table 12 (table 7 for parts B and C) trend from table 11 seasonally adjusted series.

In any X–11 run there will be four standard applications of the extreme value procedures, based on tables B3, B8, B13 and C13. If trading-day adjustment is specified, extra steps are included in the process outlined above, and there are additional applications of extreme value procedures. In any one application, a moving five-year standard deviation (sigma) of the latest estimated irregular series is calculated; a weight is then assigned to each irregular value based on its position in relation to specified multiples of the calculated sigma, which are known as the inner and outer sigma limits. Any value within the inner sigma limit is given full (unit) weight; any value outside the outer limit has zero weight; any value between the limits has a partial weight tapering linearly from unity at the inner limit to zero at the outer limit. This weighting system determines the detection and modification of extreme values in the X-11 procedure.

Round-up: what's new in economic statistics

Trade and Industry

The issue of *Trade and Industry* for 21 July contains an article describing a new quarterly survey of output and employment on new construction work, which was launched by the Department of the Environment in the last week of July.

The inquiry covers a sample of the construction projects reported by private contractors, which provide the basis for the statistics of construction orders: each sample project will be followed through to its completion, with new ones being added each quarter.

Forecasts of consumers' expenditure

Changes have recently been made to the way in which the Treasury calculates its forecasts of consumers' expenditure. An article in the August issue of *Economic Progress Report* explains how the Treasury model now takes into account personal wealth as well as personal income. This is based on the theory that consumers may increase saving to restore the real value of financial assets.

Employment Gazette

Among the main features of the August issue of *Employment Gazette* are two articles highlighting different aspects of youth unemployment. One looks at the reasons in this country behind the worldwide phenomenon, while the other looks at the effectiveness of one of the special measures adopted in Britain – the Work Experience Programme.

The statistical features in this issue include household spending in 1977; unemployment and vacancies by region and occupation; quarterly labour turnover figures in manufacturing for March; and earnings and hours of manual workers in certain industries in April 1977.

Index of sources

Data given on page **5** may be more recent than that shown elsewhere in the publication.

United Kingdom balance of payments; National income and expenditure. In addition to the series indexed below, further detailed statistics are included in the regular quarterly articles (see inside back cover).

	Page	*Source*	*Further statistics*
Average earnings (see Earnings)			
Balance of payments		Central Statistical Office	Financial Statistics; Quarterly articles in Economic Trends
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Official reserves	48		
Balance for official financing	48		
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Banking		Bank of England	Financial Statistics
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In relation to total final expenditure	14		
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	Page	*Source*	*Further statistics*
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Eligible liabilities (see Banking)			
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Dd 595942 K33 8/78

ISBN 0 11 724987 4
ISSN 0013-0400

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